EDITORIAL INDEX—PAGE 29

COMMERCIAL CAR JOURNAL

THE MAGAZINE FOR FLEET OPERATORS

MARCH 1948

TRANSPORTATION LIBRARY

Read: Record-shattering New York-Los Angeles Run — Pgs. 30-31

Minutes are dollars on a pace-setting transcontinental trip or on a run that covers only a few miles. As time- and money-savers, REO trucks rate praise from operators and drivers alike. REO Gold Crown engines thrive on the long haul—eat up punishing start-stop operation. REO "More-Load" design cuts inches off the wheelbase. You get *full* payload, easy handling, with a more compact unit.

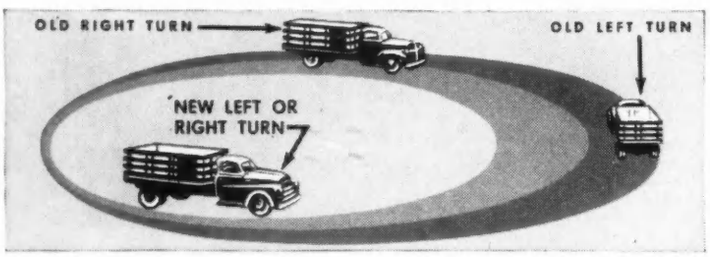
See the REO models for 1948. Check REO "More-Load" design before you order any truck. REO MOTORS, INC., Lansing 20, Michigan.

REO

Shown: REO Model 22 with sleeper cab— E. H. Warren Co.'s coast-to-coast record breaker.

ONLY DODGE OFFERS YOU ALL THESE NEW

Truck Features

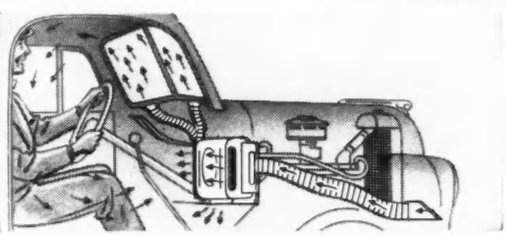


1. NEW ALL-WEATHER VENTILATION

Year-'round *comfort* is assured by a combination of fresh air intake, hot water *truck* heater, defroster tubes, vent windows, and cowl ventilator.

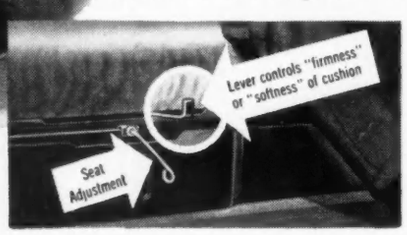
2. EASIER HANDLING BECAUSE OF NEW CHASSIS DESIGN

You can turn these new "*Job-Rated*" trucks in much smaller circles—and steering is much *easier*, too. This is due to a new type of steering, in combination with shorter wheelbases. Front axles have been moved back and engines forward, placing more of the engine and cab weight on the front axle. You get much better weight distribution.



3. MORE COMFORT FROM "AIR-O-RIDE" SEATS

New weight distribution, wider tread front axle, longer springs produce a marvelous new "cushioned ride." "Air-O-Ride" seats give a "soft," "firm," or "medium" seat. 7 full inches of seat adjustment.



4. IN ALL . . . 248 BASIC "JOB-RATED" MODELS

Every unit of every Dodge truck, from engine to rear axle, is "*Job-Rated*" for economy, performance, and long life. You save money with a truck that fits *your* job! 248 *different* basic chassis and body models, engineered for gross vehicle weights up to 23,000 pounds, and gross train weights up to 40,000 pounds.

NEW DODGE "Job-Rated" TRUCKS

...and only Dodge builds "Job-Rated" trucks!

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COMMERCIAL CAR JOURNAL

with which is combined Operation & Maintenance

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Dump Units match all truck makes and models, deliver their loads faithfully and earn more for you.

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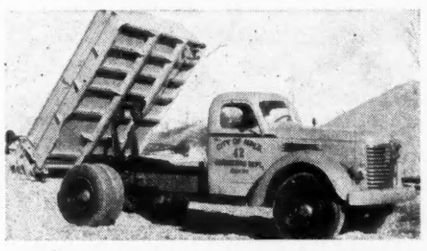

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Record-shattering New York-Los Angeles run made by drivers on their first transcontinental trip

Photo finish with the clock! Five seconds to go and transcontinental truckers arrive at Los Angeles City Hall. They left New York City just 93 hours ago. That's a REO they pushed over mountain and valley roads to capture new cross-country record. Trip was timed by A.T.A. officials.

No wonder drivers Reolle and Culver held their pace! Both drivers with 16-year no-accident records found their REO "More-Load" design truck handled like a dream under all driving conditions. City hall greeting in Los Angeles by Earl Carroll Girls was an unexpected surprise.

← **Congratulatory handshake** from the boss, E. H. Warren (second from left), goes to driver James Culver. D. C. Streeter (center), General Sales Manager of REO Motors, says "Well done" to other half of driving team, August Reolle. Walter Pickhardt, Vice President and General Manager, Fruehauf Trailer Company of California, completes welcoming committee.

Two E. H. Warren drivers log 3,123 miles for 93-hour history-making journey

AN AMAZING new record was set by August Reolle and James Culver, drivers for the E. H. Warren Company, Detroit.

Leaving New York City at 10:00 a.m., October 25, with ten tons of furniture, the two drivers took turns piloting their tractor semi-trailer with sleeper cab. It was their first cross-continent trip.

At 7:00 a.m., October 29, they pulled up at the curb in front of the Los Angeles City Hall. Just 93 hours elapsed time since they swung aboard their red REO in New York City. (96 hours running time due to zone changes.)

The record run coincided with the convention of the American Trucking Associations, then in progress in Los Angeles. Representatives from the convention were on hand to greet the two happy drivers—and went all out in congratulating them.

What is the story behind this fabulous cross-country drive?

First, let's look at the truck. Reolle and Culver drove a Model 22 REO "More-Load" design tractor with sleeper cab pulling a Fruehauf van. The shorter wheelbase of the REO truck is certainly a big factor in the easy handling the drivers experienced on treacherous, winding mountain roads. Hairpin turns and punishing grades are all part of the rough going between New York and Los Angeles. REO's easy and accurate steering counted plenty there.

"More-Load" design, by the way, is REO's exclusive method of keeping both drivers and operators satisfied. For in "More-Load," REO has cut inches off the wheelbase thus shortening the turning radius for driving ease. REO is still giving *full* payload in a more compact unit with "More-Load" design.

But shorter wheelbase isn't the sole reason for REO's success. REO's Gold Crown Engine supplies the power and stamina that gives first-class performance, low oper-

★ ★ ★

ating costs and minimum maintenance—things all truck owners and operators are looking for. The cowl-hinged hood gives easy access to the engine without removing fenders.

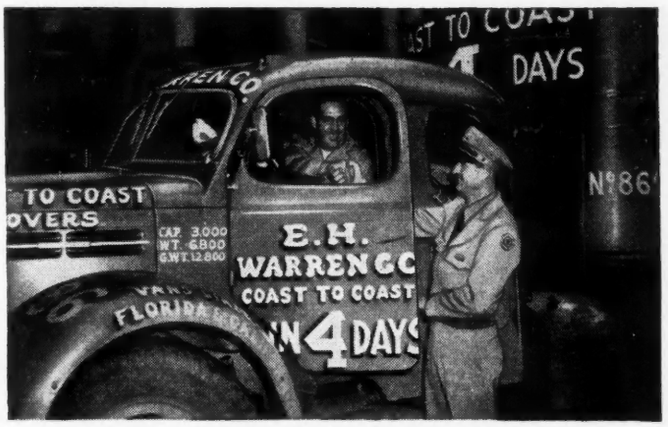
On straight-aways, like the drivers found on Wyoming's plains, cab comfort became a major consideration. REO's wide, roomy doors, plentiful ventilation and easy-riding seats cut driver fatigue. Complete comfort meant many extra miles per day. REO models for 1948 boast plenty of leg and foot room. Comfortable, adjustable driver seat with extra clearance between seat edge and steering wheel is standard equipment.

Drivers Reolle and Culver could well appreciate REO's chassis balance and straight-line stability when hundreds of miles of tedious pavement lay before them on the western end of the run.

City driving, with ten tons of furniture on behind, brought out the benefit of large, fast-acting brakes and REO's exceptional over-the-hood full vision. Again, REO "More-Load" design was a constant aid with its shorter turning radius when heavy city traffic demanded quick and close driving.

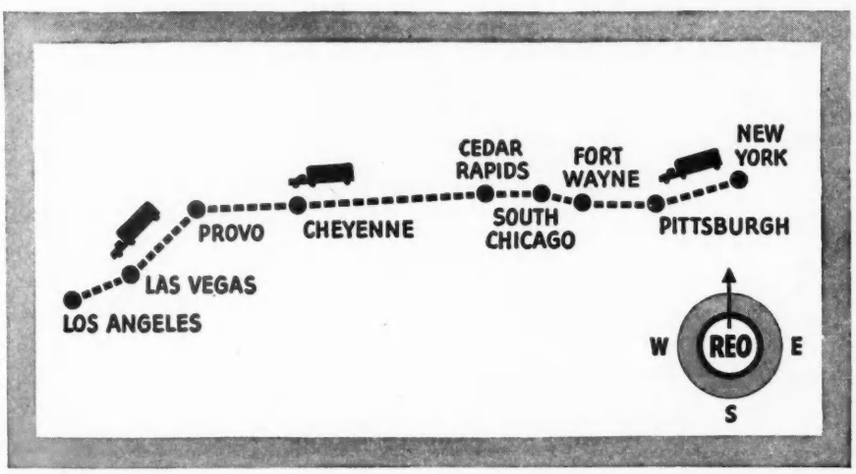
The same high standards set at the A.T.A. National Truck Roadeo—where REO trucks took *all* first and second place honors in 1947—are matched everyday by REO trucks on everyday jobs.

The New York-Los Angeles record set by drivers Reolle and Culver in their Model 22 REO graphically proves what the experts know: REO is the "Truck of Champions."



Three champions meet. Standing, Chester W. Smith, winner of A.T.A. National Truck and Full Trailer title at 1947 Roadeo. Smith, like all other first and second place Roadeo winners, drove REO trucks with exclusive "More-Load" design. Seated, grinning, James Culver, who helped set transcontinental time record. Third champion in picture, REO Model 22 "More-Load" design truck. REO is truly "The Truck of Champions."

Time out for chow, a stretch and talk about the rough going yet to come. Champion drivers Culver and Roelle haven't a worry in the world about the ability of their big Model 22 REO "More-Load" design truck. REO's straight-line stability and easy-to-handle steering wheel takes a load off the driver, makes job easier in every way.



The route the record-makers took! NEW YORK CITY: Easy and accurate steering of REO "More-Load" design takes heavy traffic in its stride. PITTSBURGH, FT. WAYNE, SOUTH CHICAGO and CEDAR RAPIDS: Curves, hills and frequent start-stop show the advantages of REO economical operation; REO utilizes full vision and reliable, smooth-working brakes.

Up and over the mountains is the final test for REO "More-Load" design that permits shorter turning radius; well-balanced chassis. REO's Gold Crown Engine really lays the miles behind—with unbelievable economy.

CHEYENNE, PROVO, LAS VEGAS and into LOS ANGELES. Steady, rugged REO power; easy comfortable cab gives the driver a break on long, hard stretches; keep up the mile-per-hour average that makes the difference.

REO

REO MOTORS, INC., LANSING 20, MICH.

NEW STANDARD OF THE HIGHWAY

THE NEW INTERNATIONAL KB-8-1

★ Speeds Deliveries
★ Takes Hills Faster
★ Hauls More Net Payload

THE KB-8-1—READY FOR THE ROAD—Engine: International Red Diamond 401; brake HP 140. **Wheelbase:** 137, 149 and 161 inches. **Transmission:** 5-speed, over-drive or direct in fifth. **Rear Axle:** Single-speed or two-speed. **Brakes:** Heavy-duty, extra-capacity, hydraulic, hydrovac actuated, or air brakes. **Fuel Tank:** Large capacity, safety type. **Generator:** 300-watt, 6-volt for fast charging. **Cab:** International; seat and back adjustable; sponge rubber cushions; dual windshield wipers; tachometer; marker lights; hand-control valve and connections for semi-trailer brakes. **Tires:** 10.00 x 20.

THE NEW INTERNATIONAL KB-8-1 is just one in a long list of answers International provides for today's truck transport problems—answers that speed deliveries, cut transport costs and improve traffic conditions.

★ The KB-8-1 speeds over-the-highway deliveries. Shipper, consignee, consumer and operator benefit.

★ It has the extra power to climb hills faster and maintain rigid schedules.

★ It carries more net payload without exceeding its gross weight rating than trucks with the same power but more chassis weight.

International Trucks are completely co-ordinated to the work they do. They're performance-co-ordinated with *specialized* engines, transmissions and axles. They're load-co-ordinated by the exclusive International Truck Point Rating System.

Right now International Dealers and Branches are equipped for expert application of all benefits the new KB-8-1 brings.

And there is an equally efficient International for all other truck jobs.

Motor Truck Division
INTERNATIONAL HARVESTER COMPANY
180 North Michigan Avenue Chicago 1, Illinois

THIS EMBLEM IDENTIFIES GREAT TRUCKS
INTERNATIONAL

INTERNATIONAL *Trucks*

CCJ READER DIGEST

DO YOU KNOW THE ANSWERS?

Are downdraft carburetors more efficient than updraft types? P. 42

How much better tire mileage can fleets expect with wide base rims? ..... P. 47

Why does this fleetman build his own bodies? ..... P. 55

CHECK YOUR KNOWLEDGE?

What are the primary advantages of Socony-Vacuum's new dual fuel system? ..... P. 63

Do you have the dope on new GMC models? ..... P. 70

Are cost ratios up or down for carriers in the Detroit area? P. 86

143,000 Miles from Rebuilt Engines

by T. J. BAUER, Shop Supt., Frisco Transportation Co.

FRISCO Transportation Co., a subsidiary of the railroad Co., has its sights set on 150,000 miles between engine rebuilds and has reached the 143,000-mile mark. To accomplish this better-than-average record, the company has instituted a number of unusual shop practices, yet has kept them within bounds of a reasonable budget for shop equipment expenditures. They grind their own crankshafts but use a portable grinder attached to an old lathe with special worm-drive. They line bore bearings and give all rebuild engines an eight-hours break-in at 25 mph on a shop-built test stand. And there are quite a few other tricks. See page 38.

Maintenance Beyond the Book

by SAM HAYS and J. E. ROLLWAGE, Silver Eagle Co.

JULIUS GAUSSOIN's Silver Eagle Co. believes in two kinds of maintenance—the ordinary PM and day-to-day repair kind, and the kind that improves on equipment supplied by the manufacturer. In this latter field the company has made several notable strides, among them an efficient expansion chamber for use ahead of the standard-equipment muffler on large diesels, a special reamer for truing cylinder sleeve seats and a threaded metal bushing of the "slinger" type as a replacement for leather oil seals on pinion shafts. When tests proved that there was an appreciable time lag in the air brake system of lengthy vehicle trains (Silver Eagle's units are in the 72,000 lb class), the company streamlined all the air lines, eliminated several superfluous fittings and substituted push-in type connectors similar to those found in every modern repair shop. See page 60.

Million Dollar Garage

by WALTER RUDOLPH

THREE years ago fire destroyed the main garage of the East Ohio Gas Co. in Cleveland. To replace it the company decided on a million-dollar venture that would incorporate "all the answers." The new three-story building, just finishmed, is completely fireproof, provides storage facilities for 165 vehicles, service facilities for 300 and has such exceptional features as a paint shop with water-wash exhaust system, easy-access ramps to all floors, power-driven floor washers and mobile fire fighters equipped with their own refrigeration plants for the CO. See page 34.

An Unusual PM System

by C. G. LONG, Operations Manager, Lyon Van Lines, Inc.

A FEW months ago CCJ described the unusual and highly departmentalized service facilities of Lyon Van Lines in Los Angeles. Here is the story of how these facilities are used to best advantage in the performance of everyday preventive maintenance on a production line basis. Key to the whole system is a single "master form" which contains everything from the driver's complaints to the shop superintendent's OK. In between is sufficient space to enter other neteded repairs and also to paste on a proper inspection form for anything from a grease job to a complete engine overhaul. These inspection forms are printed up in pad form and gummed on the back so that they may be easily attached to the "master form." The whole Lyon set-up os as efficient as that. See page 44.

Safe Driving Quiz

by ARO LEKANDER, Supervisor of Driver Training, Detroit Creamery

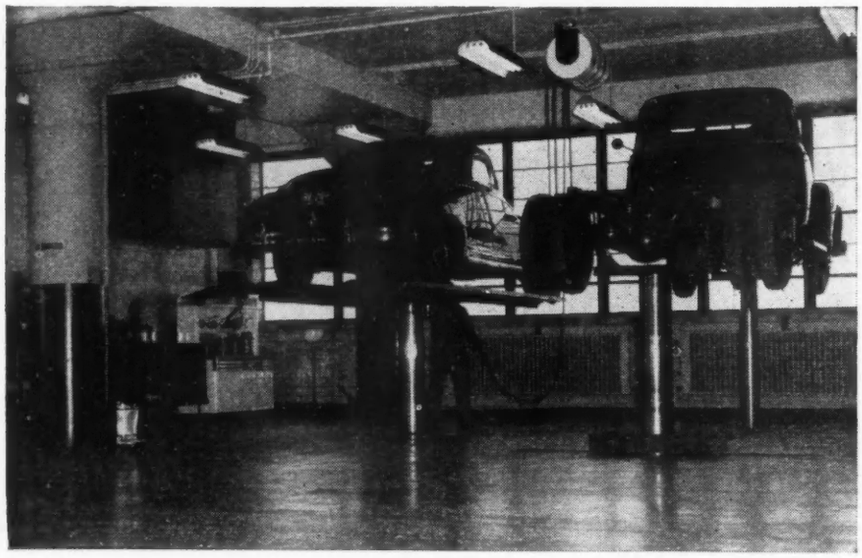
IN the August, 1947 issue, this uthor described his mechanic's questionnaire for screening applicants. The story brought in so many requests that he had to run off a special mimeographed letter to answer them. Now he describes in details the workings of his driver selection and training program which includes, but by no means stops with—a driver's quiz. The selection process takes in a whole day of indoctrination wherein the applicant is not only judged, but given a lot of helpful advice. The training program never stops. Both are described beginning on page 52.

The Conference Corner

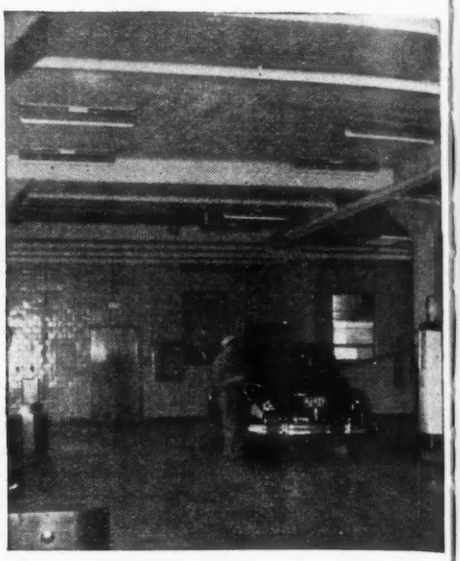
by M. K. SIMKINS, Technical Editor, Commercial Car Journal

ARE down-draft carburetors more efficient than up-draft types? Engineers differ in their opinions on this subject. Some say that the difference in efficiency is not appreciable, while others insist that up-draft carburetors cut horsepower to a certain extent, due to design characteristics. In any event the information brought out on these pages will be interesting and educational reading for the maintenance man.

CCJ has developed this department, The Conference Corner, for just this short of discussion. Fleetmen already have contributed many maintenance questions with the idea of having factory engineers provide technical answers for better vehicle maintenance. If you have a design, maintenance or operating theory problem, send it in and let us ask experts to help with authentic and up-to-the-minute answers. See page 42 for carburetor data.



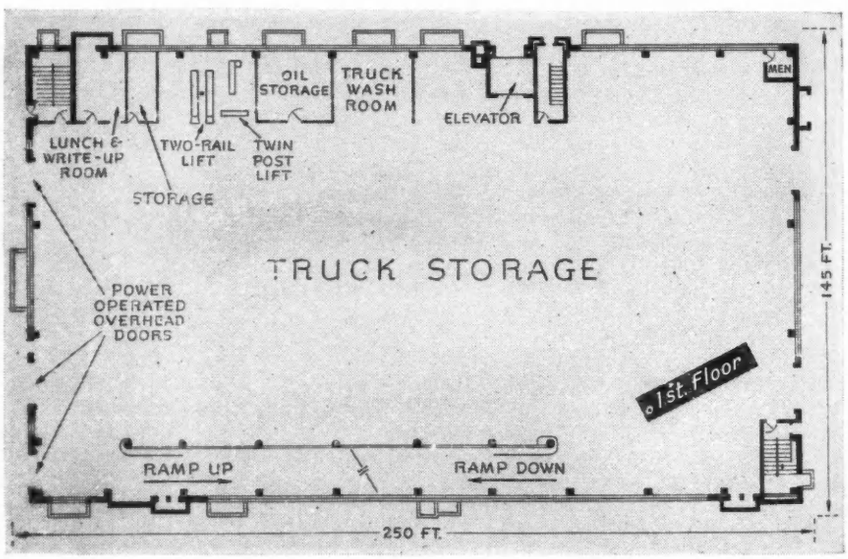
Single and twin post lifts are used for lubrication. More lifts upstairs



Fuel island is convenient to all entrances and ramps. These are dispen-

MILLION-DOLLAR

First floor plan shows arrangement of main doors, ramps, and departments. Main service area is on second floor



THREE YEARS AGO last October a fire wiped out the main garage of The East Ohio Gas Co., Cleveland division. About a year ago operations were begun in the company's carefully studied answer to the disaster—a million-dollar plant incorporating features of decided interest to all fleet operators.

Out of the huddle of company management, engineers and architects came these specific stipulations for the new plant:

1. All-masonry construction of basement, first and second floors in the 145x250 ft. building, permitting wide aisling although requiring no heavy structural steel.

2. Thorough electrification, realized not only in excellent lighting facilities, but through application of electrical power and safety devices wherever feasible.

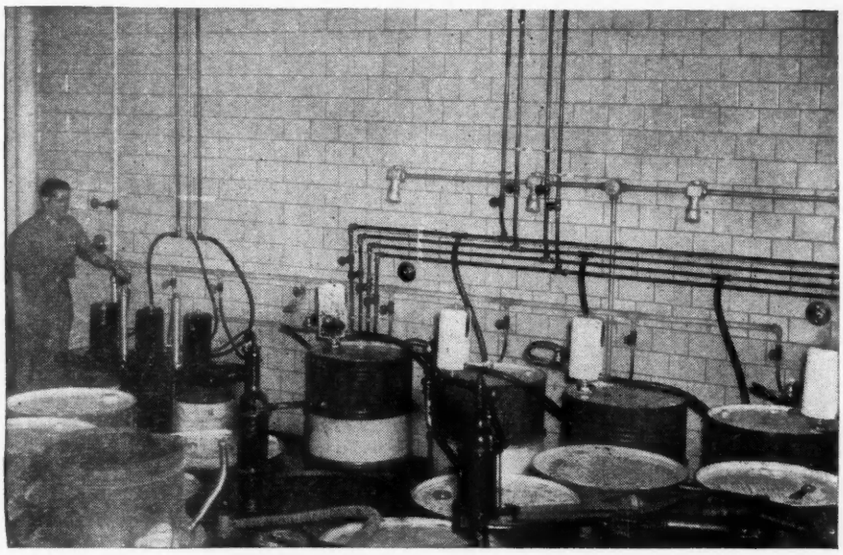
3. Storage for 165 vehicles.

4. Operating and repair facilities for twice that number of vehicles, as East Ohio Gas has three other "preventive maintenance" centers in greater Cleveland to feed major work to the new plant.

5. Location of repair department on the second floor of the garage to remove repairmen from ground floor dampness, most of the confusion attendant upon vehicle storage and to facilitate uninterrupted work.

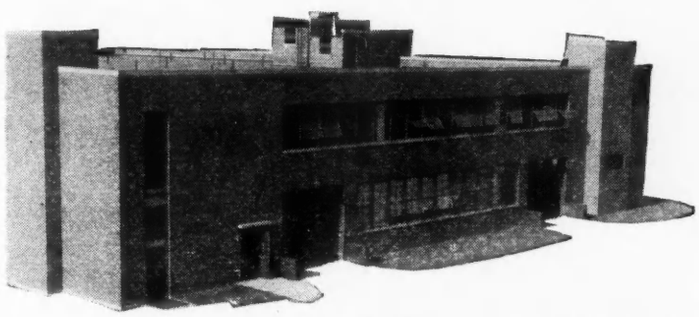
6. Custom-built paint room facil-

sers only. Pumps and 16,000-gal gasoline storage tanks are underground



Oil storage room is adjacent to lube dept.; features air-operated pumps

GARAGE



New building gets plenty of daylight; all-masonry, fire-proof construction

by ***WALTER RUDOLPH***

1. Features fire-proof construction

2. Provides thorough electrification

3. Stores 165 vehicles on three floors

4. Offers repair facilities for 300 units

5. Centralizes service on second floor

6. Houses paint shop with water-wash filter

7. Dispenses fuel inside from outside storage

8. Has 96 x 23 ft stock room and tire shop

ities to promote overall efficiency of this operation as well as aid the company's body standardization and finishing program.

7. Location of 16,000-gal. underground gasoline storage and pump house 350 ft from the garage, available to both railroad siding and truck delivery; also, provision for the safest possible oil and grease storage and dispensation in the garage, and removal of waste oil from it.

8. Adequate stock room facilities befitting a "going and growing" concern, as distinguished from the four-by-four, cramped department too common among plants of similar size.

Any detailed discussion of the above brings out the completeness of this firm's planning for the last word in modern garage operation.

All Masonry Construction

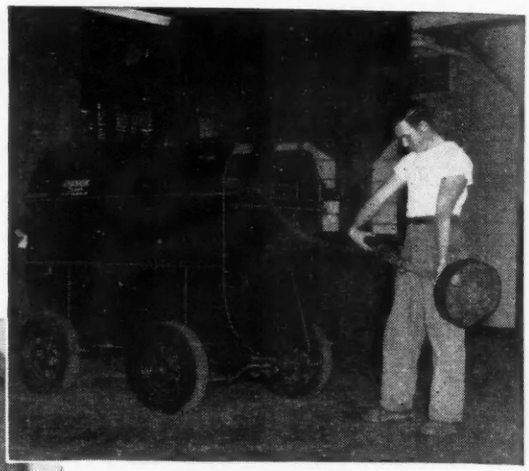
MASONRY construction includes brick exterior facing, glazed tile wall interiors, painted concrete ceilings, plain concrete flooring. Steel sash windows practically bound the first and second floors, while grated window wells permit daylight and fresh air access to the basement.

Although not air-conditioned, the building's combination of the following makes for unusually comfortable working conditions through all weather variations:

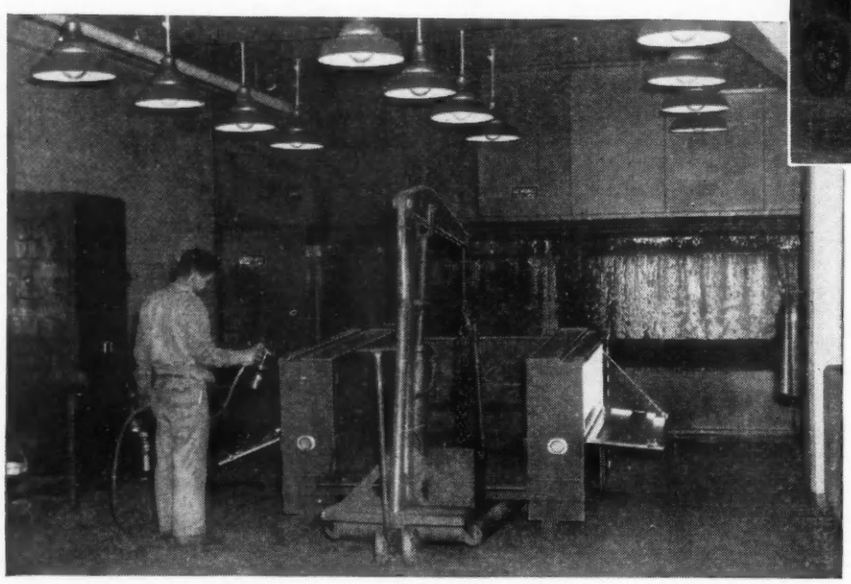
(TURN TO NEXT PAGE, PLEASE)

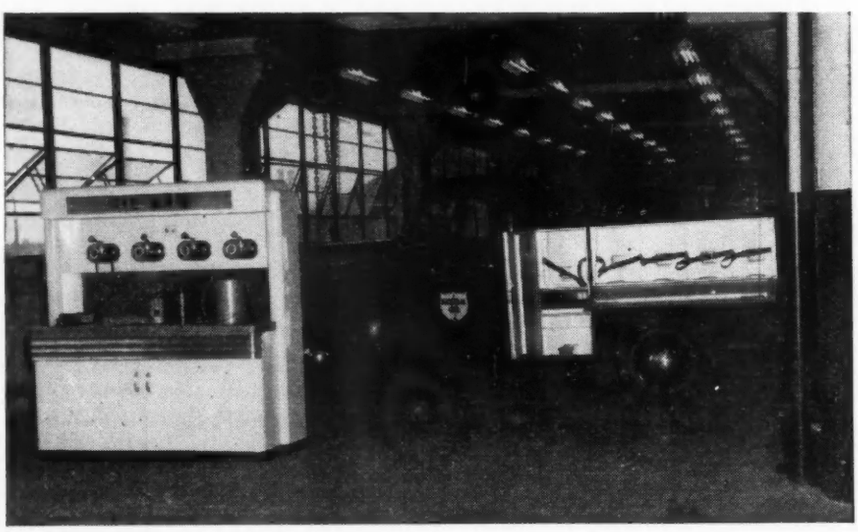
MILLION-DOLLAR GARAGE

(Continued from page 35)



Portable carbon-dioxide fire fighter has self-contained refrigeration





TOP *Paint shop is sealed and filtered; features explosion-proof lighting and water-wash exhaust system*

ABOVE *Service shop area on second floor looking from service lift area. Monorail is equipped with two lifts*

Masonry construction itself; two-inch celotex roof insulation; four corner ventilating towers; carefully planned placement of radiators and fan heating units (all fed by four low-pressure, gas-fired boilers in basement); special heating adjustments.

Powered Floor Scrubber

MAINTENANCE of the thousands of square feet of flooring is simplified by the use of a gasoline-powered floor-scrubber that removes its own soapy water with a vacuum wiper.

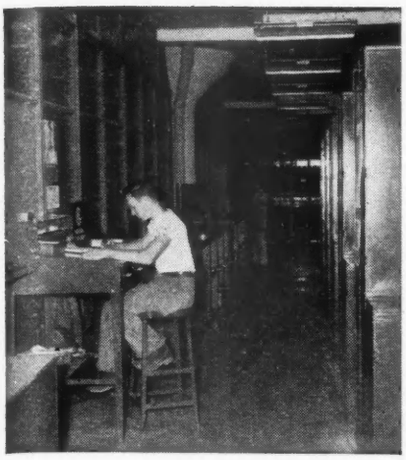
Lighting and Heating

ILLUMINATION was carefully engineered to fit a variety of needs—light for precise repair work; explosion-proof lighting to safeguard handlers of lubricants, fuel and paint; exterior flood-lighting at night for property protection from prowlers, and light to help prevent accidents.

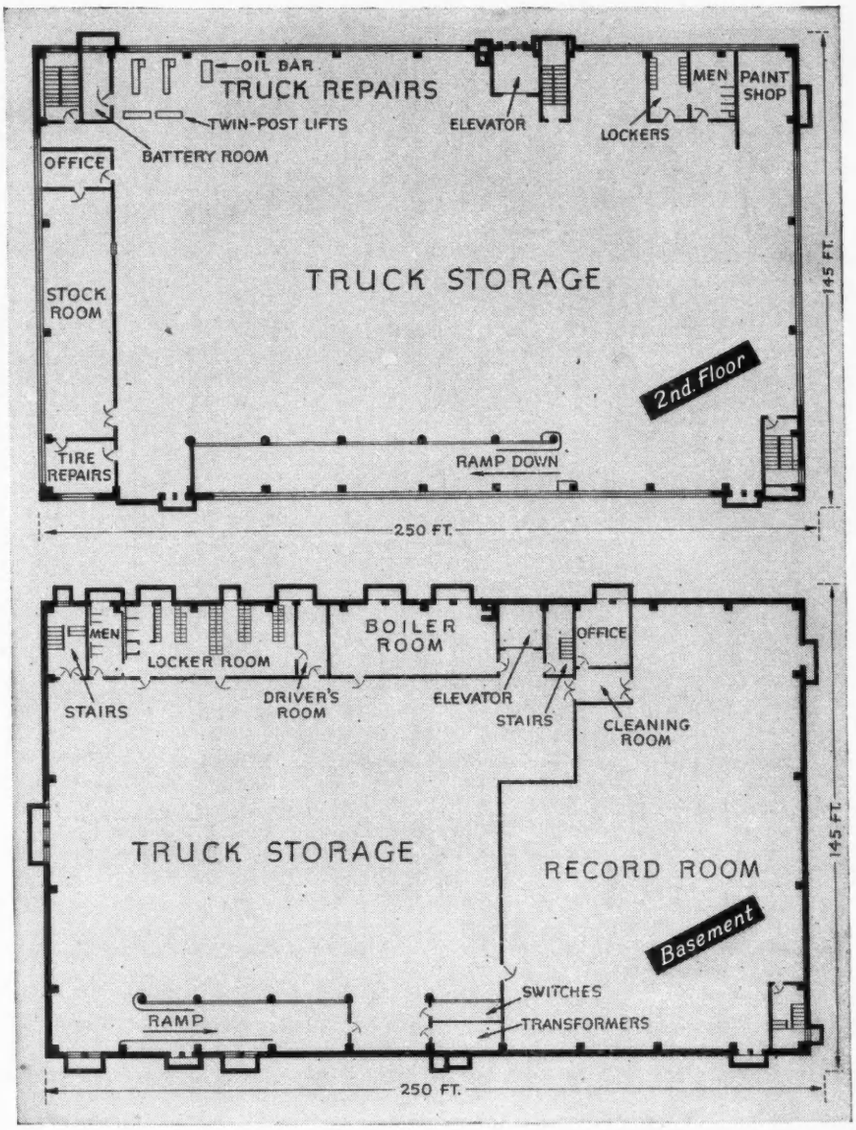
Vehicles enter and leave the second floor and basement by 14° grade ramps illuminated overhead with two rows of two-tube, 40-watt, RLM industrial fluorescent fixtures arranged to highlight the traffic lane. Curbs stand out, practically guiding vehicles with this lighting.

Photoelectric cell controls open all vehicle doors. They remain open only during beam interception, and a time delay switch turns on current for door-closing. An alarm bell rings during beam interception, forestalling the eventuality of two vehicles meeting in an open doorway.

Unit heaters are automatically turned off by a limit switch when doors are open, reducing to a minimum heat loss through intake of cold air by these heaters. During periods of mass exit or entrance of vehicles, garage workers in any department can check high or low speed operation of ventilating tower fans without moving by glancing at back-lighted red and green buttons on strategically located control panels. Thus a carbon-monoxide hazard is eliminated.



Stock room and tire repair shop is 96 x 23 ft, affords plenty of room



TOP *Second floor plan shows how major service is concentrated there*

ABOVE *Basement plan includes large records area, balance for storage*

In the lubrication storage room 200-watt explosion-proof lamps are mounted in special fixtures. Switches and wall receptacles are also explosion-proof. Air-powered pumps transfer oil to maintenance areas.

The electrically powered pumps that deliver gasoline from storage are activated in the pump house when hoses are lifted at the four dispensers in the front of the first floor, inside the building. Similar pumps unload bulk gasoline.

Ninety units of light from 12, 300-watt, explosion-proof lights were provided in the paint room to offset new paint glare by making it dim in comparison. In the basement record room, to aid identification of old, partially-obliterated figures, 35 foot-candles or units of light are provided by three-unit fluorescent lights, with four fixtures to each 25x25 ft bay.

Electrical Innovations

DURING absence of employees from the record room, temperature is automatically maintained at 60 deg. However, flicking of the first wall light switch in this area automatically trips a transfer relay that puts unit heater on the 75-deg. range.

Numerous other uses of electricity include freight elevator power, battery chargers, many tools and heating system controls. A transformer vault in the garage basement is the main power distribution point for the East Ohio Gas No. 2 Works, of which the garage is a part. All light and power used in the works is on a single meter in this vault, another convenience.

Lubrication Facilities

SINGLE post, two-rail lifts are used for light commercial units and passenger cars, twin post lifts for units over one ton. Coiled overhead lubricating hose between the lifts are installed in each of the lubricating areas. The heavier, two-post lifts are

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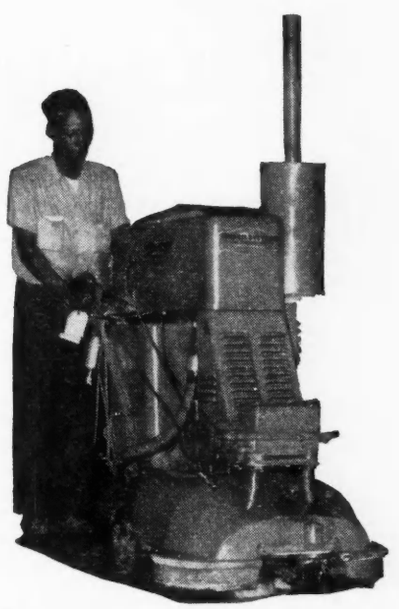
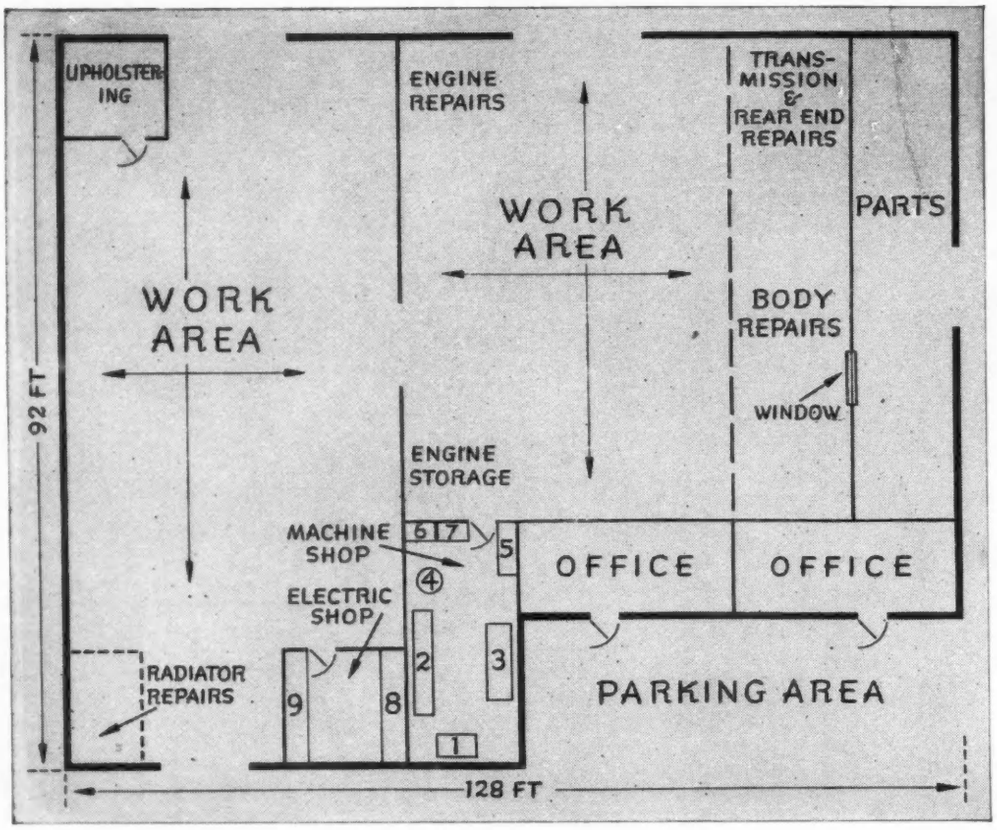


Gasoline-powered floor scrubber simplifies maintenance of huge floor area



by

T. J. BAUER

Shop Superintendent Frisco Transportation Co., Springfield, Mo.

***LEFT** Frisco shop is compact but efficient. Equipment shown by numbers includes: 1, piston grinder; 2, lathe & crankshaft grinder; 3, bench for cylinder grinding; 4, 1½-in. capacity drill press; 5, storage for taps, drills, mikes, etc.; 6, hone; 7, valve refacer; 8, parts bin; 9, test bench*

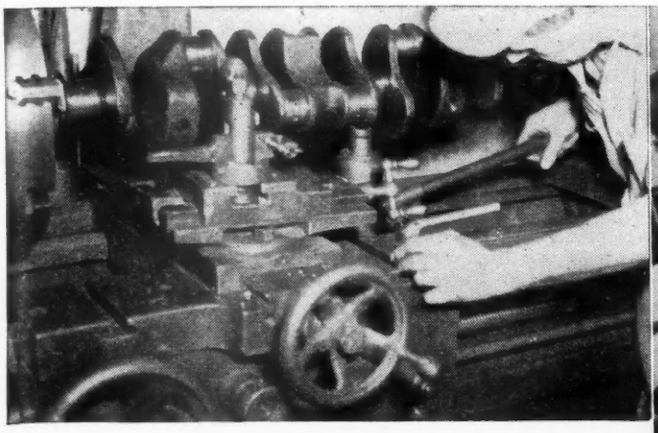
Frisco Transportation Co. has its sights on 150,000 miles between engine rebuilds. Here are the down-to-earth methods that have brought it within shooting distance

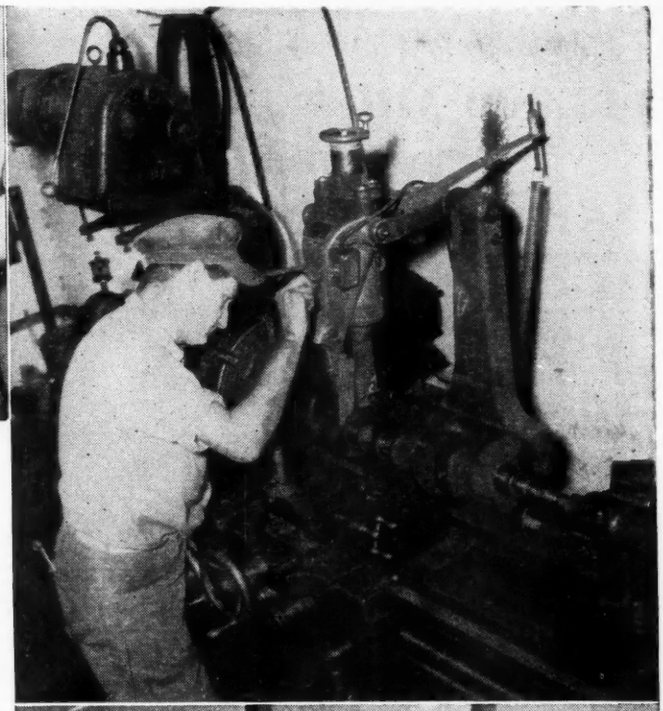
143,000 Miles From Rebuilt Engines

THE FRISCO Transportation Co., a subsidiary of the railroad company, has its main motor truck shops in Springfield, Mo., and branch shops in Memphis, St. Louis, West Plains, Joplin, Tulsa and Dallas.

All the motor rebuilding is done in the Springfield shop and the longer we can make them run, the longer time will elapse before it returns to us in the familiar big red box.

Our goal for rebuilt engines is 150,000 miles and we have reached the 143,000-mile post on some rebuilt units. While we cannot hope to eliminate the human element or equalize the work to be done, we do hope to rebuild an engine that will run 150,000 miles under almost any reasonable conditions.



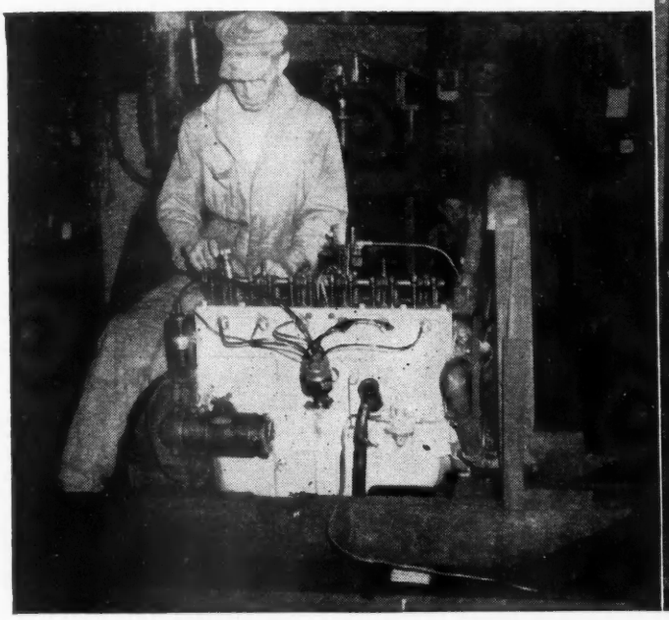


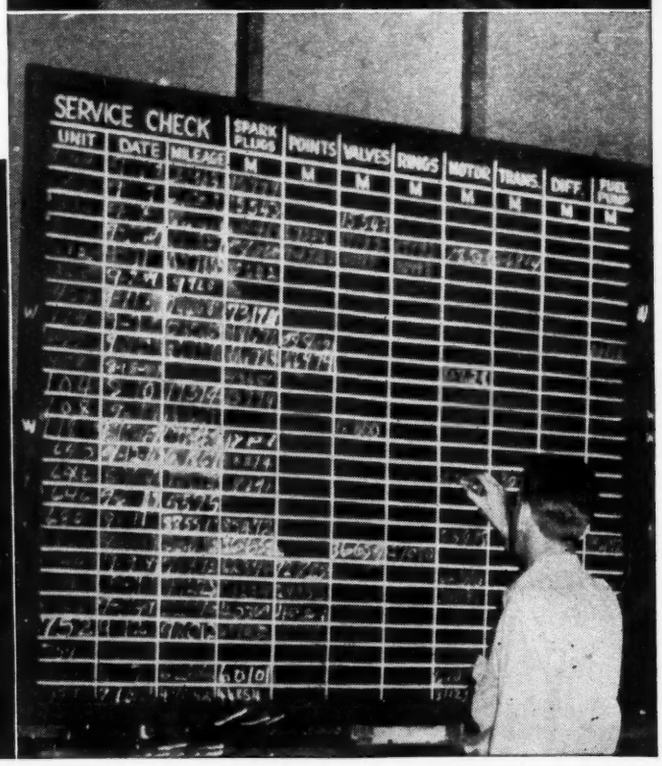
ABOVE *Small hydraulic jack is used to unkink crankshaft. Dial indicator on tool post checks each journal*

UPPER RIGHT *Portable grinder is attached to heavy lathe for crankshaft work. To eliminate lost motion in back-gear, lathe is powered by separate motor and gear*

LOWER RIGHT *Service check board records all details and progress of maximum of 50 units in shop*

BELOW *Rebuilt engine being readied for break-in on shop-built cradle. Each job gets eight hours at 25 mph*





J. G. Parrish, our fleet superintendent, has a motto that forms the background of our shop practice. That motto he often repeats and it is: "Always get a truck big enough to do the job."

Consequently we do not intend to overload or underpower but rather to try to have a reasonable reserve power above the maximum demand. It is our considered opinion that engine rebuilding programs become scrap when engines are continuously called upon to do more work than was built into them.

We have eliminated the human factor as far as the driver is concerned by relieving him of the care and trouble of breaking in our rebuilt motors. All our rebuilt motors are ready to roll when installed.

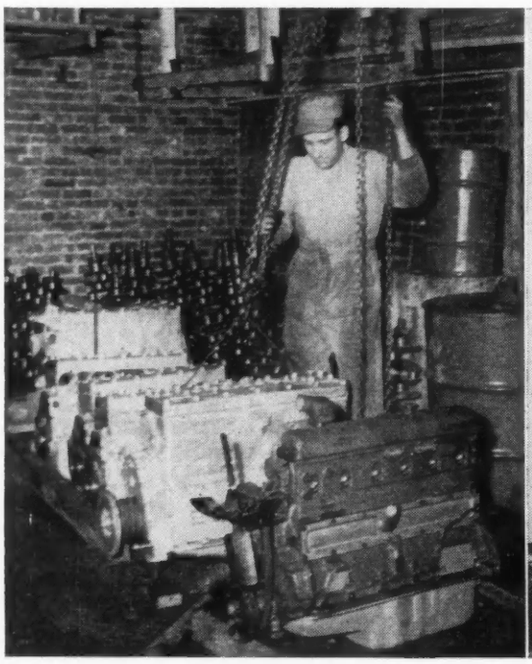
Test Stand for Break-In

AFTER a rebuild job is finished we install it is a simple test stand on which there is a radiator, battery and

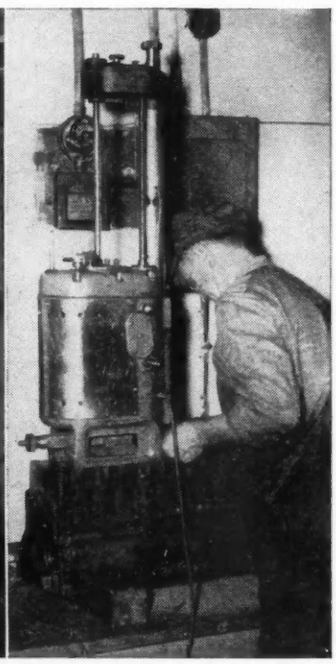
(TURN TO NEXT PAGE, PLEASE)

143,000 Miles . . .

(Continued from page 39)



Rebuilt engines to fit all truck models are stocked, ready for shipment



Frisco finds it gets closer tolerance, better performance by boring its own

a gasoline tank. This stand is mounted on skids and we usually place the stand, engine and all on a shop truck, so it can be rolled out of the way for testing and into the engine store room when the test has been completed.

We run the engine for eight hours at a speed equivalent to 20 or 25 mph. This is much faster than most engines are broken in at but we have discovered that it ruins the rings to run in the engine too slow. At a faster speed the water pump handles a more continuous flow of water under a higher pressure and better cooling is had. Oil pressure is higher and is forced to all parts of the engine and in motors which oil by combination force feed and splash, there is enough splash at that speed to do what was intended by the manufacturer.

We use an overhead oiler on all our engines and also, of course, on any engine that is being broken in on the engine stand. This oiler is usually set to drop three drops per minute at 5 inches of vacuum and 15 to 20 drops at running speed. This insures lubrication for valves and upper ring.

Incidentally we are using a Porous Krome ring in the top glands because our tear-down experience shows us that the top ring often runs dry and usually takes a whipping all the way around.

During the break-in period we keep close watch on the heat indicator.

We break in with a light oil and when the engine has passed its test, we drain and refill and mark it ready for use. Overhead valve jobs are set after the engine has reached its maximum heat. Generator, carburetor, starter, sparkplugs, in fact, all the accessories remain on the engine.

All that is needed to install a rebuilt engine is to change engines. All accessories have been completely overhauled and rebuilt and when we receive the exchange engine it gets a similarly complete treatment.

Mains Are Line Bored

WHEN we have an engine dismantled we line bore all main bearings in all size engines. By so doing we have found we can install bearings with less clearance than the average factory recommendations. Most all blocks warp some and if mains are installed small enough to allow for a light cut with a line boring tool, any block distortion is eliminated as far as the main bearing alignment is concerned. We set our main bearings on our Whites at .002 while the factory clearance allowed is .004½.

Another thing we do in the interests of permanent alignment is to use the same tension on all main bearing caps, using a torsion wrench. The block can be thrown out of line by tightening one or two caps too tight.

Shafts Straightened & Ground

WE get much more service out of our reground crankshafts since we started doing our own because we take more care with them. We have found that crankshafts when removed from an engine may be kinked from .002 to .030. Outside grinders often go ahead and grind these kinked shafts and the result is an engine that gives trouble or has a short life.

To handle crankshaft grinding, we converted a standard lathe by using a portable crankshaft grinder, and making some changes and learning some lessons. While conversion of old lathes into crankshaft grinding equipment is not especially recommended. Nevertheless, during the period when new machinery was virtually unobtainable, such a converted machine becomes a valuable and indispensable piece of equipment.

One advantage is that when not engaged in grinding crankshafts, the lathe may be used as a shop lathe.

This particular lathe is a quick-change lathe of ancient manufacture with a 18-in. swing and a bed length of 6 ft. It is backgeared and has been equipped with a modern individual motor drive.

But don't let the drive fool you as an advantage in crankshaft grinding. In order to get the necessary low rpm in the lathe (not the grinding tool), we had to use the back gear. When we used the backgear we found that the ground journal had feathering

(TURN TO PAGE 112, PLEASE)

The OVERLOAD

Jersey Carriers Vote No . . . Toll Road Delusion . . . Leasing Undermines Regulation

by ***GEORGE T. HOOK***
Editor

NEW JERSEY motor carriers don't want regulation. The New Jersey Motor Truck Association polled member and non-member carriers to find out how they felt about a movement to place property carriers under Public Service Commission regulation. The vote was 2 to 1 against regulation. The for-hire carrier vote was 65 per cent against and 35 per cent for. All classes of carriers voted 68 against and 32 for.

* * *

The result of the voting is interesting as an expression of carrier opinion. But issues of this sort never have been decided by the democratic process wherein the will of the majority of those concerned prevails. The history of State and Federal regulation of motor carriers shows that the numerical minority invariably prevails because it is representative of the larger carriers. Such carriers can more readily knit themselves into an association, raise the necessary funds and press for the regulatory objective.

* * *

Regulated carriers don't have any picnic under regulation. Those who favor regulation seem to want it as a relief from cut-throat, dog-eat-dog competition. A few nurse the idea that the certificate means a monopoly and a get-rich-quick opportunity. But regulation hasn't worked out that way. Actually the result has been simply a more orderly form of competition.

* * *

Whenever regulated carriers let their hair down they have no difficulty finding many things about regulation to damn. But always one of their number will pipe up with, "Yes, but would you want to go back to the old days of tooth and claw competition." And it will develop that nobody wants to go back. It will be interesting to see if history repeats itself in New Jersey.

IN the field of economics there are many delusions. Currently the delusion that privately-financed toll roads are a means whereby the public stands to get something for nothing is as super as the toll highways themselves. The notion that, without laying out a cent of public funds, without any borrowing and going into debt by the commonwealth, without any taxation of the individual, a super-highway can be built and in 30 years (so the promise goes) turned over to the public as a free road, appeals to a lot of people.

* * *

In the opinion of H. S. Fairbank, deputy commissioner of the Public Roads Administration, roads now built as toll roads will never be freed by self liquidation. Because, he says, when he finds that the scheme of financing involves the borrowing of capital for 30 years, he knows that by the time the last of the bonds are paid for it will be time to borrow some more to rebuild and alter and enlarge the existing facility, as time and change have a way of requiring. And meanwhile the users of the highway will be paying a toll which, in the case of the Pennsylvania Turnpike, is the equivalent of a 15-cent tax on gasoline. It is sounder economics to build free roads of the kind that are needed, where they are needed.

---

ing ordered by the Commission catches the for-hire interests with their views unreconciled. Efforts to develop viewpoints of the various types of carriers have been made but they show such a diversity of opinion that, as of the moment, reconciliation of these views seems to be an impossibility. And unless the carriers do get together and go into the hearing with a compromise agreeable to all, the I.C.C. may impose rules that are not to their liking.

THERE is considerable agreement that truck leasing as currently practiced by for-hire carriers with each other and with shippers is "undermining" Federal motor truck regulation. But what is a valid lease? Even the Bureau of Motor Carriers, by the admission of its director, has been trying to get the Interstate Commerce Commission to answer that question. So, if carriers and shippers are engaging in leasing arrangements that are, in the eyes of the Bureau, subterfuges to evade regulations, only the Commission itself is to blame.

* * *

A commonplace example of a lease which the Bureau considers a subterfuge is the case of a shipper who has 20 truckloads of freight. He says to the common carrier that his rate is too high. He suggests that trucks be leased to him with drivers at a flat rate which is lower than the published rate of the carrier for such commodity. The carrier sees the "wisdom" of such an arrangement because there is always another carrier in sight who is angling for that shipper's regular business.

* * *

Of course it is not always the shipper who makes the subterfuge proposition. Carriers competing for a shipper's business have been using the leasing arrangement to get a foot into a door that has been closed to them. And brokers with rights but no equipment have been using the equipment of common carriers and "gypsies" to effect leasing arrangements with shippers which have put trucks on routes where they have no right to be, according to regulatory authorities. All in all, a hash is being made of regulation and it was high time the Commission did something.

* * *

The trouble is that the leasing hear-

(CONTINUED IN ADJOINING COLUMN)

The Conference

QUESTION: . . Are Downdraft Efficient Than

Experts Answer Fleetman

Some fleetmen have been converting updraft carburetors to downdraft types—and vice versa—with the idea that the new installation would provide increased power and efficiency. Claims for the conversion have been conflicting, and letters from fleets indicate that the question should be referred to engineers. Here are their answers to the problem of carburetor efficiency.

There are many such engineering problems awaiting the attention of experts. You many want to include your own problem. Send it to our technical department.

Next month we have asked engineers to discuss the use of expander rings and/or skirt expanders as a cure for oil-thirsty engines.

Differ Little in Efficiency

E. A. Rullison
Tillotson Mfg. Co.

"The two types of carburetors differ very little in metering or functional efficiency. Cold starting such such temperatures as reduce cranking speeds and commercially satisfactory function with high capacity carburetors in relation to displacement, favor the downdraft type. Other advantages or disadvantages usually pertain to installation clearances. Steering post interference is eliminated with the downdraft type, also air cleaner installations are simplified. Cab over engine structures generally favor an updraft carburetor for the obvious clearance problem."

Downdraft Gives More Horsepower

M. J. Kittler
Holly Carburetor Co.

"It is generally accepted in the industry, although the opinion is not 100 per cent unanimous, that a downdraft carburetor installation can be worked out to give several per cent more horsepower than an otherwise equally satisfactory updraft installation. The basic reason for this is that the updraft carburetor and riser need to be made slightly smaller than the corresponding downdraft carburetor in order to maintain higher velocities to lift the mixture through the carburetor and up into the horizontal portion of the manifold. In the downdraft installation the flow from the carburetor into the horizontal portion of the manifold is assisted by gravity and a larger carburetor can therefore be used, thus giving a percentage gain in horsepower. The overwhelming preponderance of downdraft installations on both passenger cars and trucks confirms this opinion, in our estimation.

"Whether or not an existing engine should be converted from updraft to downdraft depends on whether a suitable downdraft installation has been worked out. Work of this type should properly be done by the engine builder. A homemade conversion is very likely to be unsatisfactory.

"Because of space limitations and/or other installation problems, the use of updraft carburetors is quite common on cab-over-engine trucks, marine engines and tractors.

"The feeling about downdraft carburetors is not 100 per cent unanimous and there are some vehicles still being built with updraft installations because the manufacturer has not seen fit to adopt downdraft carburetors."

A Matter of Accessibility

F. E. Williams
Bendix Aviation Corp.

"Providing the manifolding is equally efficient, there is no reason why the carburetion should be more effective whether downdraft or updraft. After all, the carburetor is a metering device which mixes the fuel and air in the proportion required by the engine. That mixture proportion can be varied in many ways to meet various operating conditions, manifold designs and other factors which have an influence on the final delivery of fuel into each respective cylinder.

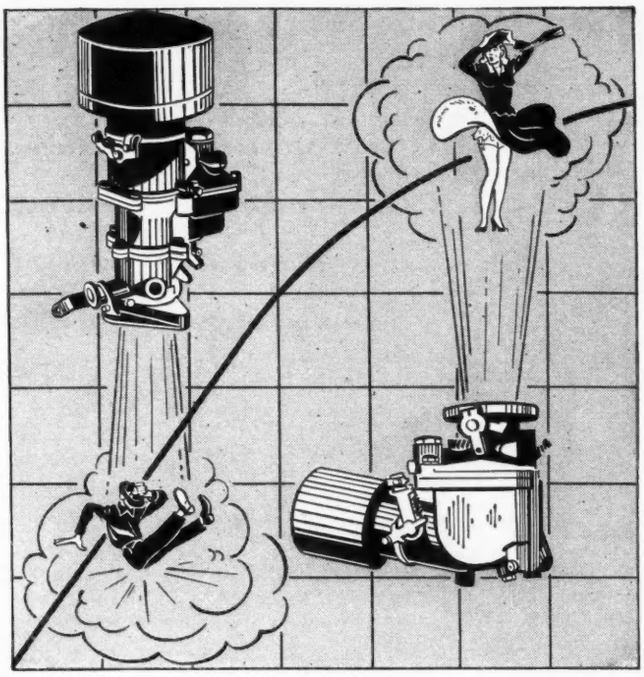
"We believe that one of the principal factors favoring downdraft carburetion was a matter of accessibility. By putting the carburetor on top of the manifold it elevated it from the already crowded area below the manifold and eliminated interferences with fuel pump, generators and other equipment.

"There are many manufacturers who produce vehicles on which downdraft carburetion is generally used; however, they also produce some vehicles on which updraft carburetion is used on the same engine. This will usually be traced to the fact that the updraft carburetors are used on cab-over-engine installations where head room is an important factor.

"If one wishes to delve into the development of carburetion, it is not difficult to find that many years ago (and this refers to a matter of twenty-five to thirty years) carburetors

Corner

Carburetors More Updraft Types?



Verdict of Conferees

Engineers generally agree that the two types of carburetors differ little in metering or functional efficiency. However, some prefer the downdraft unit since it is said to make available slightly more power with the same size carburetor; there is less restriction to the air flow; larger filters may be used.

were being made with side outlets, top outlets and in various other forms. Experimentally we made downdraft carburetors in 1916 and produced them for some engines used in World War I in 1918. Nothing much was heard then about downdraft carburetors until many years later. The selection as to the carburetor installation, we believe, relates more closely to expediency than anything else."

Downdraft Shows Better Performance

Robert H. Thorner
Mallory Electric Corp.

"It is our opinion that, although there is no theoretical difference between an updraft and a downdraft carbureator, in practice a downdraft installation can show better performance. In a downdraft installation, any heavy unvaporized droplets of gasoline will fall in the hot intake manifold and readily vaporize, whereas in an updraft carburetor the heavier droplets do not fall on the hot manifold.

"Furthermore, the carburetor used with an updraft installation usually is somewhat smaller which increases the venturi and manifold suctions and tends to promote vaporization; also the higher air velocities accompanying a smaller carburetor aid in carrying the heavier droplets of fuel into the engine with an updraft installation. A smaller carburetor naturally restricts the maximum amount of air that will flow into the engine thereby reducing the peak power of the engine. Hence updraft carburetors are primarily used whenever clearances prevent the use of downdraft carburetors. In our opinion, a downdraft installation is preferable."

Clearance Determines Installation

Neil M. Hurry
Marvel-Schebler Carburetor Div.

"We do not agree that downdraft carburetors will improve engine operation nor would we recommend any modifications in the original installation.

"In most cases manufacturers have used the downdraft installation because of its accessibility and where they have gone to the updraft, it has usually been because there has not been sufficient hood clearance on that particular installation."

Downdraft Has Several Advantages

"In a downdraft unit it is possible to obtain more power with the same size carburetor because there is less restriction to the air flow and consequently a larger volume can be taken into the engine. In adidtion, it permits the use of a larger and more efficient air cleaner and in many installations it also results in cooler intake air temperatures. This, of course, varies with the installation.

"It is felt that the accelerating performance is also greatly improved in the downdraft unit for the same size venturi.

"The downdraft permits easier adaption to the engine and simplifies the throttle and choke control hookups as well as accessibility. From the standpoint of installation alone, you will well appreciate that on some old type installations there was considerable difficulty in making a carburetor adjustment as well as engine valve adjustments.

"Regarding the continued use of updraft carburetors we believe you realize that the final decision of one over the other is determined from the actual test results and other governing factors."

Master control form, complete with driver complaints and inspection details glued to it, guides vehicles through highly-departmentalized shop layout to insure complete production-line preventive maintenance

by ***CHARLES G. LONG***

General Operations Manager, Lyon Van Lines, Inc., Los Angeles

An UNUSUAL PM SYSTEM

"HIT OR MISS PM" is gone forever. Our new "production line" service and maintenance, together with a simplified system of forms, gives us a methodical, thorough check of every piece of equipment. Control of vehicles is as precise as a production line itself. In use since March last year, the system is applied to our 166 pieces of equipment which are all serviced at our new Los Angeles terminal.

"Production line" PM and simple forms have a fine influence on employee morale. Drivers take their vehicles on the road knowing the exact "health" of the equipment, and with confidence in its operating ability under all conditions of road travel. Maintenance personnel take pride in having an abundance of the best tools and equipment always on hand and a minimum of "red tape" paper work. The result pays off in the higher quality of their work and greater interest in the job.

Lyon's vehicles travel a total of 9,455,000 equipment miles annually, carrying household goods over the western mountain and desert areas. Five diesel and seven gasoline straight trucks travel 1,515,000 miles per year. Ten diesel and 27 gas tractors cover 2,305,000 miles per year. Trailers and semi-trailer combinations—101 in all—go 5,095,000 miles annually and 16 convertergears (semi-trailer with dolly) travel 540,000 miles annually.

The entire PM procedure at the new terminal revolves around the "Master Form (Fig. A) and the garage superintendent, who acts as coordinator of all work.

Master Form—Key to PM

THE first thing the driver does when he enters the gate of the company yard—and every driver adheres to the following routine after every trip—is to stop at the dispatcher's office. He reports himself and his equipment in, and picks up a blank "Master Form" (Fig. A). This form is simple in its setup and use. It is an 8½ x 11 in. mimeographed sheet with headings for truck number and mileage, and trailer numbers and mileage. The main portion of the form is a ruled section following the heading "Work to be Done." The driver fills out the headings, and lists in the "Work to be Done" space all items that he feels should be checked. The "Master Form," in its initial use, is a squawk sheet.

The bottom section of the form carries a line for the driver's name, and lines for "Time & Date Available," "Time & Date Wanted," dispatcher's signature, mechanic's name,

EDITOR'E NOTE: Lyon Van Lines new maintenance headquarters in Los Angeles, using separate buildings for each service function, was fully described and illustrated in the September, 1947, issue of CCJ beginning on page 38. This article is a logical "follow-up" describing in detail how these exceptional facilities are utilized for preventive maintenance.

Truck No. 350 Mileage 57,150 Trailer No's. 525 Mileage 18,106

Work to be Done

Check fuel pump & injectors - Starting to smoke - JB ✓
Left front tire - Inspect & replace if needs - Home ✓
Check drive line for noise R.C.V

Clearance light on trailer keeps burning out
Check for short - D.B.V
Flat spare on trailer rack. Home ✓

Left rear spring bushing loose on #350: R.C.V

Driver Rosenberger

Time & Date Available 7-5-47 1 PM Time & Date Wanted 8 AM 7/8/47

Dispatcher Farley Mechanic J. Barlow

Date & Time Completed 7/8/47 10 AM Garage Supt. Graves

FIG. A

FIG. A *This is "master form" on which all service needs are entered including driver complaints, maintenance superintendent's notation and various inspections to be performed. It is a simple 8½ x 11 in. mimeographed sheet*

FIGS. B to E *Individual numbered PM inspection forms for each of four inspection periods. They are 4 in. wide and gummed on the back. When inspection is called for, proper type is glued to "master form," above*

LEFT *Isinglass container holds "master form" on vehicle*

INSPECTION No. 1 — FIG. B
EVERY 5,000 MILES
ALL PARTS AND MATERIAL USED ARE EXTRA

Clean and Adjust Spark Plugs
Check Compression, 1, 2, 3, 4, 5, 6
Clean and Adjust Distributor Points
Clean Distributor Cap and Terminals
Check Engine Timing and Correct if Necessary
Tighten Ignition Primary Terminals
Adjust Foot and Hand Throttle
Set Carburetor Idling
Clean and Tighten Battery Cables
Refill Battery with Water
Clean Fuel Sediment Trap
Check Generator Charging Rate, and Reset if Necessary
Check Ignition and Lighting Switches
Check Horn and Windshield Wipers
Check All Instruments
Check Governor Setting
Check Starter
Tachometer
Speedometer
Air Stop-Lite Switch
Check Headlights and Clearance Lights

Mileage ..... Date
Signed ..... Mechanic

INSPECTION No. 2 — FIG. C
EVERY 10,000 MILES
ALL PARTS AND MATERIAL USED ARE EXTRA

Tighten Cylinder Head and Adjust Valves
Tighten Manifold Nuts
Clean Air Cleaner and Refill
Tighten Radiator Mounting Bolts
Adjust Steering Gear, if Necessary
Check Front Wheel, and Set Toe-in if Necessary
Check Front Wheel Turning Radius, and Correct if Necessary
Tighten All U-Bolts, Front and Rear Springs
Tighten Cab Mounting Bolts
Check Fan Belt, and Adjust if Necessary
Check Muffler, Exhaust Pipe
Check Brakes, and Adjust if Necessary
Check Master Cylinder Fluid Level and Refill
Check Wheel Cylinders and Report
Check Fuel Lines and Tank
Check Frame and Report
Check Front Fenders and Report
Check Rear Fenders and Report
Check Front Springs and Report
Check Rear Springs and Report
Check Clutch for Slipping and Report
Check King Pins, Bushings and Report
Road Test Truck and Report
Clean Windshield, Door Glasses, Inside of Cab and Lights
Check Clutch Pedal Clearances, and Adjust if Necessary
Lubricate Chassis
Check Engine Oil Level
Check Transmission and Differential Grease Level
Oil Door Hinges
Check Radiator and Hose Connections
Air Compressor
Air Governor
Air Horn
Treadle Valve
Quick Release Valve
Foot Valve
Glad Hand
Check Hydraulic Air Cylinder
Check Injectors
Check Rocker Arms and Rollers
Check Fuel Filters and Screens
Check Idling Adjustment
Check Fuel Tanks
Tighten Axle Flange Nuts
Check Rear Housing for Looseness and Grease Leaks
Check Emergency Brakes
Check All Wheel Cylinders and Tighten Brakes
Set Toe-in and Check Tires Rear or Front Axles
Remove All Wheels, Examine Brake Drums, Lining, Hydraulic Wheel Cylinders, Clean and Repack Wheel Bearings with Fresh Lubricant and Adjust Bearings.

Mileage ..... Date
Signed ..... Mechanic

INSPECTION No. 3 — FIG. D
EVERY 25,000 TO 30,000 MILES
Recondition Valves and Remove Carbon

Mileage ..... Date
Signed ..... Mechanic

INSPECTION No. 4
EVERY 50,000 TO 60,000 MILES
Remove Engine Oil Pan, and Inspect Connecting Rod and Main Bearings, Remove Pistons, and Examine Piston Rings, Pins and Valves Replace, if Necessary. Check Cylinder Walls and Pistons for Wear.

Mileage ..... Date
Signed ..... Mechanic

FIG. E

"Date & Time Completed," and, finally, the garage superintendent's signature.

"Time & Date Available" is the notation the dispatcher makes to inform shop personnel as to the availability of the vehicle for the work required in the "Word to be Done" section. "Time & Date Wanted" gives the garage superintendent the time element within which the work should be finished. On this basis, he assigns a shop priority to the vehicle.

The "Master Form" goes in turn, then, from driver to dispatcher, to garage superintendent. A typical example can be followed on Fig. A. Driver Rosenberger has brought Truck No. 350 and Trailer No. 525 into the yard after the long 1013-mile haul from Portland, Ore., to Los Angeles. His report on the "Master Form" shows "fuel pump and injectors starting to smoke," "left front tire needs inspection," and "drive line should be checked for noise." Additional notations include a request to check for short on trailer clearance light, which keeps burning out. The driver also records a flat spare on the trailer rack.

The dispatcher takes the form and marks the date and time at which the equipment will be available to maintenance personnel. He also indicates the time and date that the equipment will be required for its next assignment. The form now goes to the garage superintendent's office.

The first thing the superintendent does in all cases is record the mileage figures indicated on the "Master Form" heading in a scratch book. This is a simple record kept on a pad with a separate page for each truck and trailer. The entry made is only the date and mileage figure shown on the new "Master Form." He checks each new entry in his scratch book against the last recorded mileage figure for the particular truck or trailer. This immediately gives him the number of miles traveled by the vehicle,

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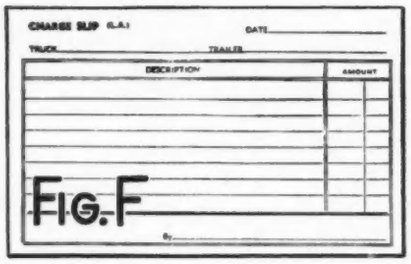
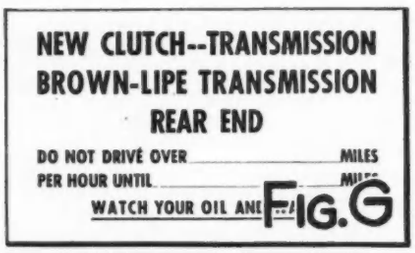
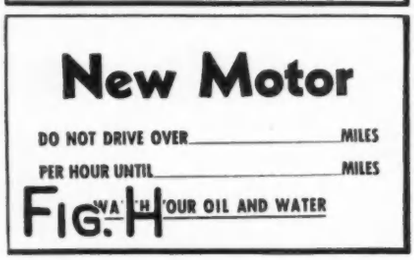






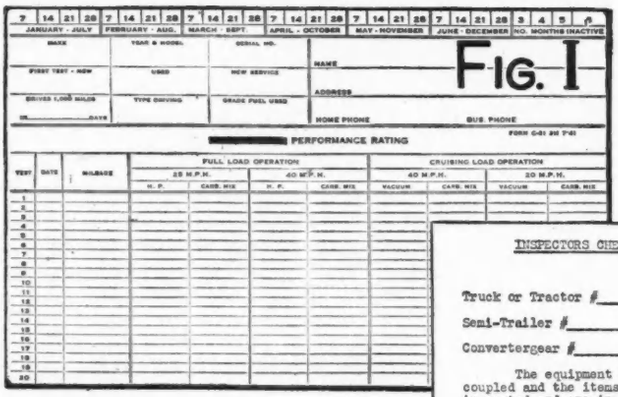


FIG. F *Charge slip used by lube department indicates all items used*

FIGS. G & H *Stickers for cab panel warn drivers of special work done*

FIG. I *Performance Rating Card is used to record dynamometer readings*

FIG. J *Check list for safety equipment is filled out before departure*

An UNUSUAL PM SYSTEM

(Continued from page 45)

and thus indicates the appropriate PM check. The superintendent then calculates the amount of service and maintenance time that will be required, judging on the basis of the total time needed for the work indicated by the driver, and for the mileage inspection indicated by his mileage record. Of course, before arriving at an estimated time for the work indicated by the driver, the superintendent thoroughly checks the complaint by a visual inspection wherever practicable and always following through with a dynamometer check.

He schedules the vehicle for its run through the different stations of the "production line" PM system in accordance with the estimated length of time for service and maintenance, the time the vehicle is available, and the date and time it is required for reuse.

Controlling the flow of equipment through the shop in this manner assures the vehicle the maximum time needed for PM before it is required by the dispatcher.

Gummed Inspection Slips

WHEN the garage superintendent checks the mileage figures on the "Master Form," and has determined the proper mileage inspection to be put in effect, *he pastes the appropriate inspection forms right to the "Master Form."* The inspection forms are gummed so that when attached to the "Master Form" they become a permanent part of it and cannot easily become detached and lost. The forms are returned to a leather case with an isinglass front (see cut at beginning of article) which is hung on the door or front of the truck, and the vehicle is then ready to be sent down the "production line" for its PM. The forms stay in the case all the way through the process.

Cover Four PM Periods

THE four standard mileage inspections, used for both vehicles and trailers, are based on 5,000 miles, 10,000 miles, 25,000 to 30,000 miles and 55,000 to 60,000 miles. The first two are always done as closely as possible to the required mileage inspection figure. The third and fourth checks are variable. The 10,000 mile leeway in each case allows the superintendent to use his discretion as to the best point at which the inspection should be pulled within the designated mileage limits. This prevents much needless overlapping of maintenance work, but does not jeopardize the vehicle's care by skipping a required inspection.

Inspection No. 1 (Fig. B), at 5000 miles, covers engine tune-up, brakes, instruments, lights, etc. Inspection No. 2 (Fig. C), at 10,000 miles, is more extensive and entails removing all wheels, examining brake drums, lining, hydraulic wheel cylinders, etc. Inspection No. 3 (Fig. D) entails reconditioning of valves and removal of carbon which is done between 25,000 and 30,000 miles, at the discre-

(TURN TO PAGE 122, PLEASE)

ABOVE *Assistant manager, Arthur Weeks points to new semi-drop center 5.50 in. rim, modified from standard drop center wheel (left) with 4 in. rim*

ABOVE *Typical Krug Baking Co. truck originally designed for ½-ton load but modified with wide-base rims, heavy front axle*

RIGHT *Neil McEwan, director of maintenance who pioneered conversion to wide base rims*

Wide-Base Rims

Reduce Tire Cost 29%

by ***PHIL RUSKIN***

Fleet results show up to 40% more tread mileage, greater carrying capacity, fewer road calls and double the number of recaps

NEIL McEWAN, director of maintenance for Krug Baking Co., Inc., Jamaica, N. Y., is a pioneer in the practical application of wide-base rims for tire economy and lower maintenance costs. Out of a total fleet of 680 trucks, mostly ½ and ¾-ton models, he has converted over 300 to wide rims and plans on doing the entire fleet as soon as possible. Says McEwan, "The installation of wide rims was a lifesaver for us during the war; now, we find that they represent a real saving."

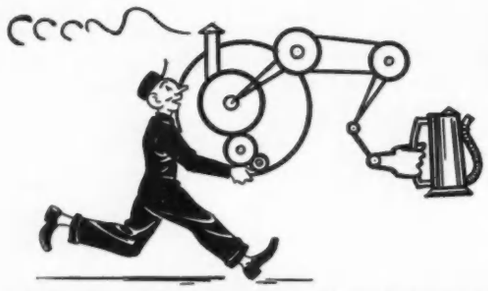
The idea of using wide rims, by which is meant having a rim-to-tire ratio of approximately 70 per cent, is not new.* There are records of experiments of this type dating back to the early days of the pneumatic tire. One tire service outfit reports that they started with wide rims back in 1930 when changing over "solids" to "pneumatics." However, the start of World War II in 1941 and the accompanying tire conservation program saw the first large-scale effort to adopt wide rims. The sudden stoppage of new tires for civilian use got the boys to thinking about keeping their vehicles rolling. That is exactly the spark that started Krug Baking on the wide rim program. Routes had to be doubled up. Heavier loads had to be carried. Repairs, parts and maintenance were suddenly at a premium. It was a "belt tightening" period, and of principal concern was sufficient "rubber" to maintain a normal delivery schedule.

5.50 Semi-Drop-Center Rims

"WHEN we decided to change our 4:00 and 4:50 rims to 5:50's, we shopped around and ended up by doing a little redesigning ourselves," Neil McEwan relates. "You see, along with the change to a wider rim, we decided it was advisable, also, to climinate the drop-center feature of the existing standard rim equipment. Experience showed that beads were being broken on the truck-type tires when forced over the rim into the

(TURN TO PAGE 128, PLEASE)

* For complete discussion of wide-base rims, see CCJ, Aug., 1946, pg. 38.

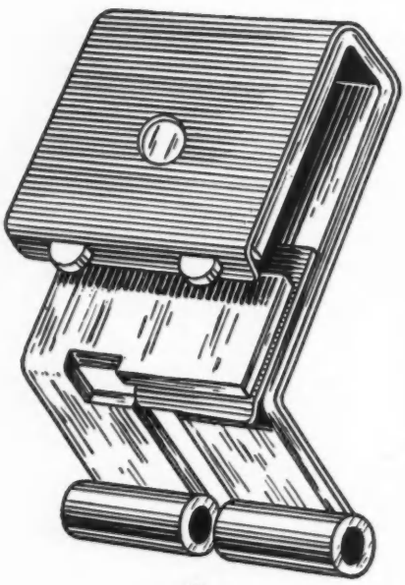


$25 *For the Best Hint Published Each Month*

$5 *For All Hints Published*

Short Circuit Indicator

by Clinton B. Baker
State Roads Commission,
Easton, Md.



$25 HINT OF THE MONTH

Here is a handy tool for locating short circuits in electrical wiring. The only materials needed are a small 20-amp. circuit breaker and a piece of copper tubing the size of an auto fuze.

Cut the tube to two ½-in. lengths and solder them to each contact of the circuit breaker. Insert the modified breaker into the fuze clamps, and you have a circuit tester. In event there is a dead or constant short the circuit breaker will make a click at intervals until the short is found. If it is an intermittent short, it will not click until you disturb the bare wire that is causing the trouble.

This device eliminates the hazard of grounding across the fuze block or blowing fuses when running down shorts. By using proper circuit breaker and fuse adapters, this device can be used with any system.

1. Time Saver

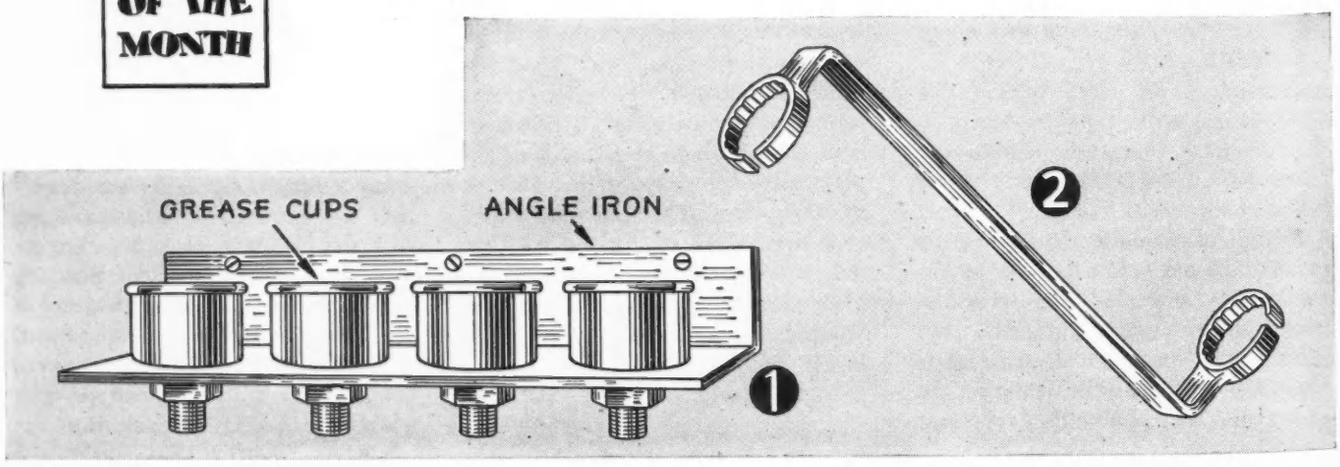
by George F. Burnley
Oakland, Calif.

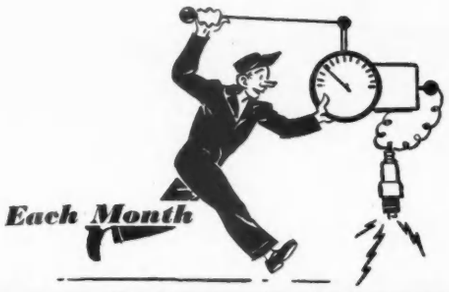
Over my bench, mounted in a neat row on a strip of angle iron I have placed a dozen old time grease cups filled with various substances used in engine maintenance. My Prussian blue, white lead, graphite, etc., placed in these grease cups are protected and easily accessible. A twist of the cap and the substance is available. This eliminates the material from getting smeared or damaged in a drawer when caps are lost or tubes are punctured.

2. Instrument Panel Wrench

by Warren Griffin
Limestone, N. Y.

Here is an ideal tool for removing nuts from underneath the instrument panel. I took a ½ and 9/16-in. box-end wrench and bent the handle at right angles so that the heads are





SHOP HINTS
FROM FLEET SHOPS

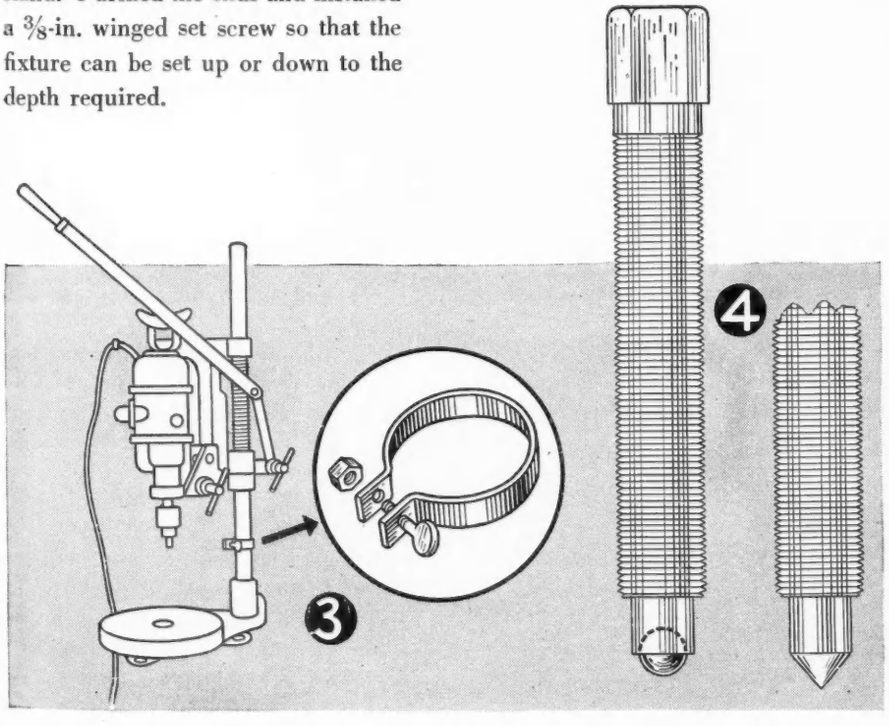
flat. Then I cut a narrow section out of each end to allow the choke and throttle wires to enter. This wrench will clip over such projections and will work very nicely on most of the nuts under the panel.

3. Drill Press Clamp

by Henry Mikulecky
Washington Coop. Creamery
Linn, Kan.

We made a clamp for our drill press to gage travel when countersinking holes or drilling a set depth in iron or wood. This will enable us to drill accurately for such work by limiting the amount of travel of the drill.

Out of a piece of ¼-in. strap iron, I bent a circle to fit around the drill stand. I drilled the ends and installed a ⅜-in. winged set screw so that the fixture can be set up or down to the depth required.



4. Puller Improvement

by G. W. Layne

Here is the way we modified our screw pullers to eliminate the galling and binding of the point on the work. This idea improves life of pullers and lessens damage to parts.

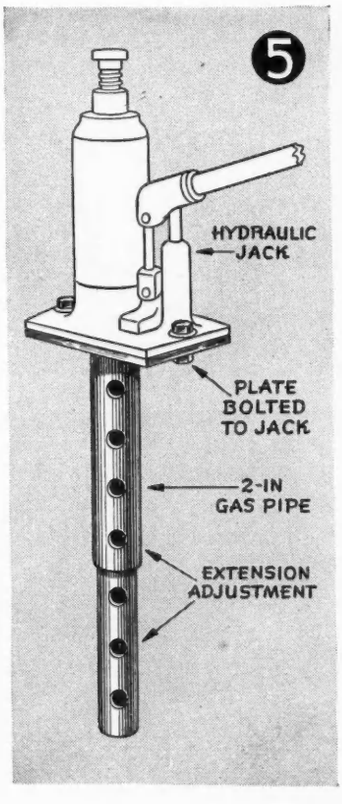
Put the puller screw in lathe and cut off point. Then drill end to the size and depth of a suitable steel ball from a bearing. Insert the ball into the end, oil the bearing and peen it lightly with a hammer. Size of ball will vary with the size of screw. I use ⅜ in. on some and even ⅛ in. on small pullers. The tip works with all sizes and improves the job a lot.

5. Jack Extension

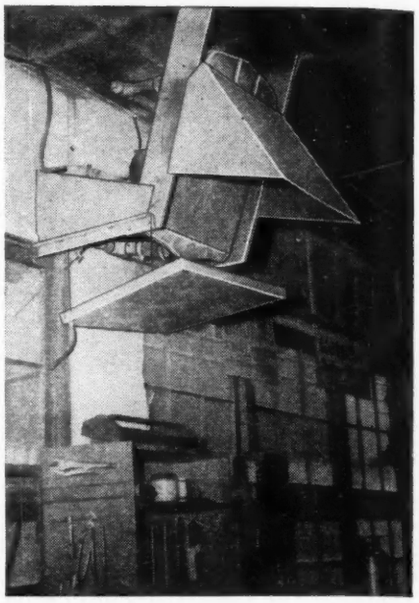
by H. Bruce
Beiter Line, Inc., Elyria, Ohio

We have had several occasions where we needed a jack longer than the standard size so I designed this extension, and it has proven very handy.

I took a ¼-in. plate 6 x 4 in. and drilled two holes in each side so it could be bolted to the bottom of a regular hydraulic jack. I welded a 2-in. pipe 12 in. long to this base, fitted an extension pipe into this and bored holes as shown so the projection could be extended to several lengths. A machine bolt is used to hold the pipes when extended.



OVERHEAD CRANE. With conventional hoists, lifts and even portable cranes, it's always a trick to have the lifting equipment in the right place at the right time. So for our new shop we have decided on the two rail type, sketched above, with full transverse movement. The pneumatic motor will be controlled by two chains and one man can easily operate it and roll it to any point.



UNIT HEATERS are efficient but expensive. So we made up our own using old truck radiators and an ordinary electric fan. Input and outlet hot water lines from the building's hot water boiler are attached to top and bottom by means of conventional automotive hose and clamps. Hot water is circulated by means of a conventional pump near the boiler, and shop-made hoods over the radiator give any desired direction of flow.

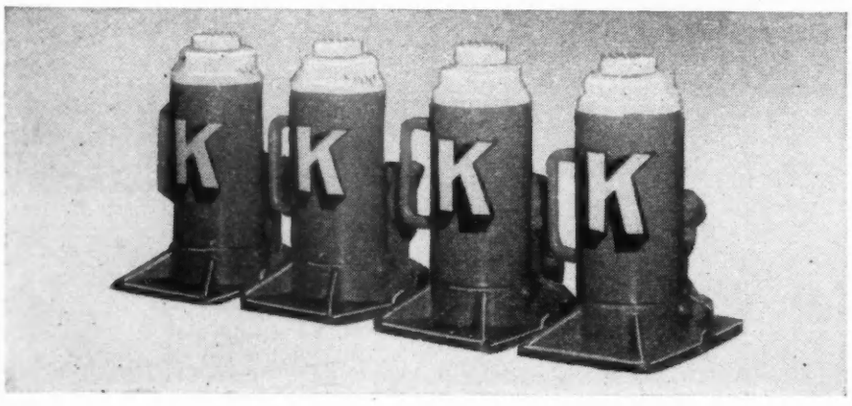
Kinks from Kimbel

A lot of little troubles—leaky doors, lost jacks, forgotten drains—can be worse than big ones. Here's how one fleetman licked them.

by ***CLAYTON DAVIS***

Maintenance Supt., Kimbel Lines, Inc., Cape Girardeau, Mo.

12-TON JACKS. Jacks are often a headache. They are easily lost and more often than not are undersized. So we have standardized on 12-ton hydraulic jobs for all our over-the-road equipment and painted them Kimbel colors—fire-engine red on the body and handle, white on top, the latter helping to make the lifting plate more visible at night. A huge K on the side makes them easily identifiable as Kimbel property, should they be left behind. A good many have been recovered that way. The jacks and handles are carried in the tool box on each truck.

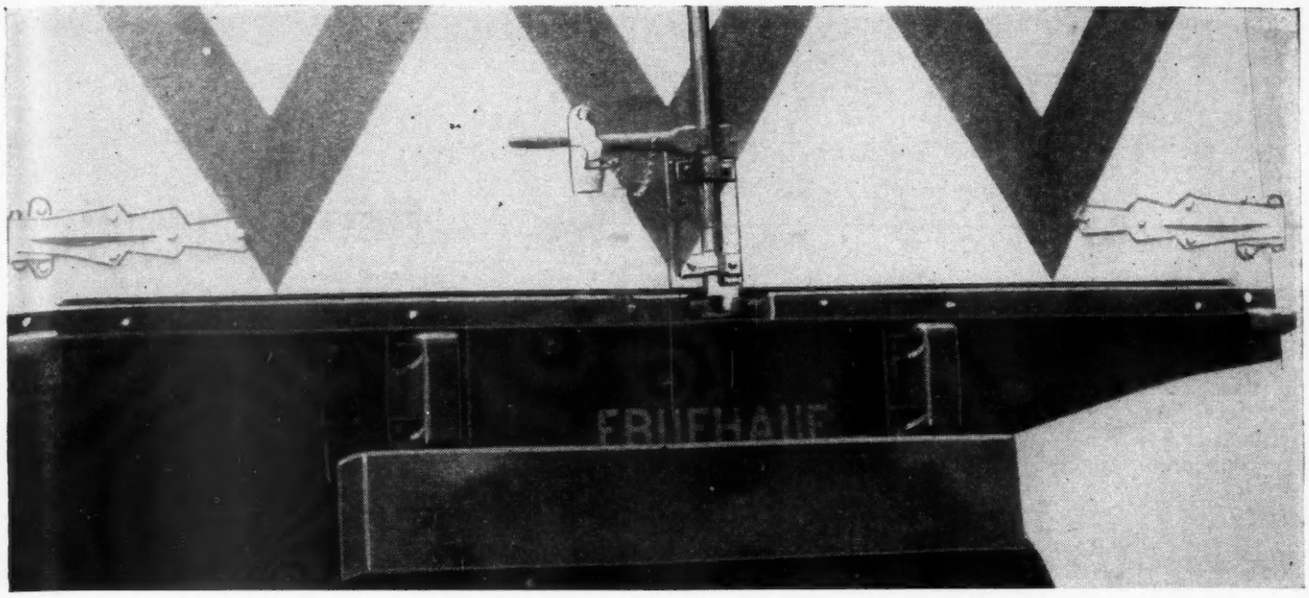


WAS EVERY maintenance man knows, a lot of small troubles are often worse than large ones. Conquering these little troubles with some form of organized effort goes a long way toward making the whole operation run smoothly.

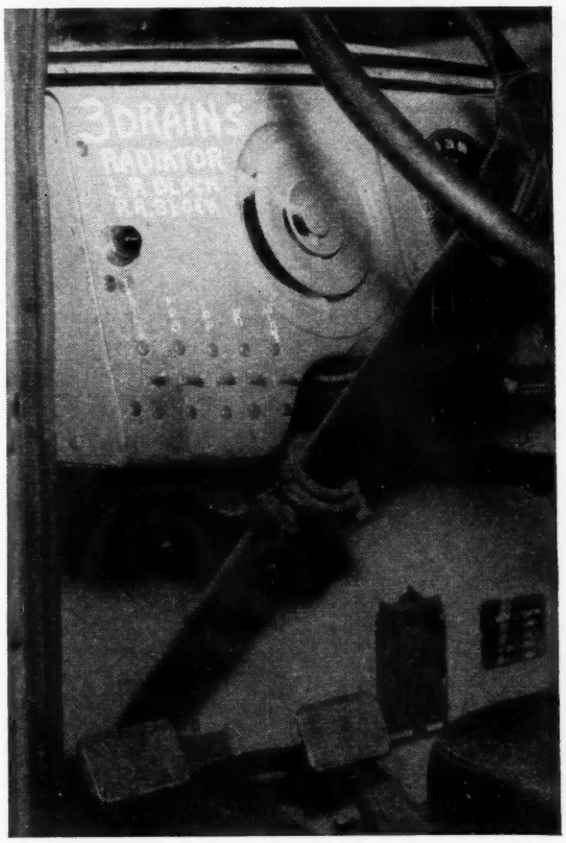
At present our shop service is done in a rather oldish building, but we have the plans all set up for a new one. The coming changeover provides us with an ideal time to take stock and make our plans for still greater efficiency.

Six of our so-called little troubles and the remedies we have put into effect to eliminate them or at least minimize them are pictured and described on these pages.

Of course we have big problems too. Readers will remember (CCJ, Sept., page 62) how we even went so far as to increase the size of some of our tractor engines by reboring or adding a longer stroke, to meet the increased power demands of our new and larger tandem axle trailers.

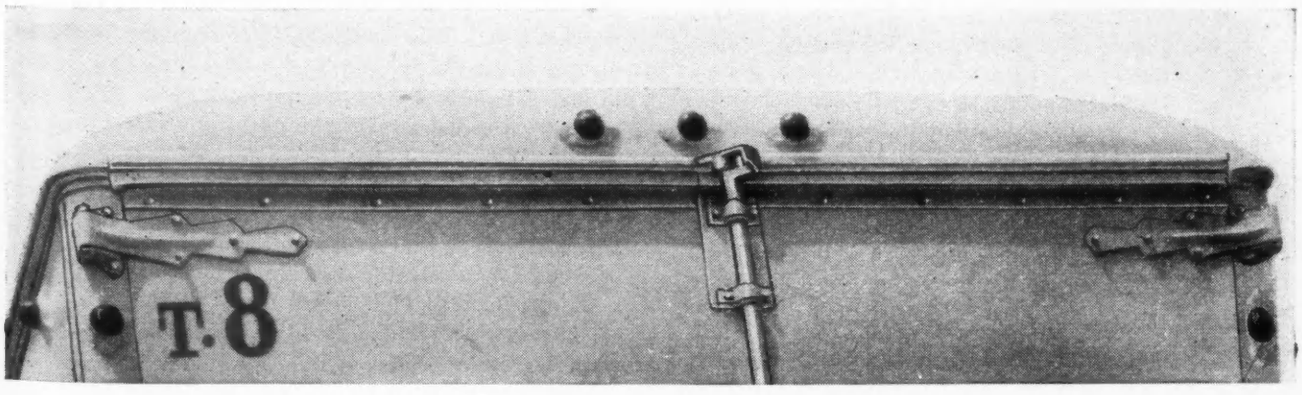


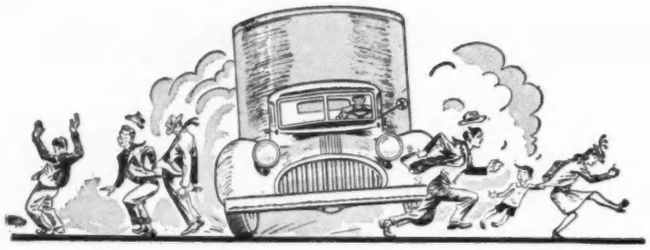
REAR BUMPERS (above). To protect vulnerable trailer doors from dock injury, we installed a small bumper that runs the full 86 in. width across the back of the vehicle. It is made of 2 x 2 in. angle iron, ¼-in. thick, and mounted so the iron is on the upward and outer side. Under it is a 2 x 2 in. strip of oak. Thus we have the protection of iron and the resilience of wood. A bonus feature is the fact that the strip acts as an excellent stop against swirling water (see below). We also installed a bumper on the rear frame ends, made of 8 x ¼-in. channel iron.



DRAIN INDICATOR (right). In our operation we do not use antifreeze and normally have no trouble. But once in awhile it is necessary for the drivers to drain radiators and engines. Sometimes they did not catch all the drains and freeze-ups in the lower sections of the engine resulted. To eliminate the possibility of costly slips we painted the number and location of all drain cocks on the instrument panel. Drivers no longer "think" there are two when there are actually three.

DOOR SEAL (below). Most trailer doors can be made to leak, and too often the remedy fails to consider water thrown upward by the air current behind the trailer. You can get a pattern of this updraft by looking at a freshly muddied trailer. Our small rear bumper (see above) keeps water out at the bottom, but to keep it out at the top, we installed two 16-gage angle-irons across the top. The upper one is 2 x 2 in., keeps water from coming down; the lower one is 2 x 1½ in. deflects the water going up. The slight overhang prevents rain from entering and there is a 1/16 in. gap between them to prevent the doors from binding.





Driver Selection

Eight-point program includes careful pre-testing, unusually thorough indoctrination, eight-mile road test and complete on-the-job follow up system

by ARO LEKANDER

Superintendent Garage Personnel and Driver Training
Detroit Creamery

IN PREVIOUS ISSUES* we told how we qualify garage mechanics before hiring them. In this article we will attempt to tell of our driver selection and training program; how we qualify them before hiring, and of the follow-up.

Upkeep of trucks is very important but, to our mind, just as important is the fellow in whose hands you will find the truck most of the time; the Driver.

In our driver selection and training program we are interested in two major factors. These are (1) the conservation of our equipment and (2) good company-driver relations. If the last can be achieved we believe that conservation of equipment follows naturally.

As we administer it our driver program falls into these eight major classifications:

1. Manager's interview with applicant.
2. Medical examination.
3. Indoctrination by safety department.
   (a) Talk on traffic regulations and safety rules.
   (b) Talk on occupational hazards.
4. Interview by supervisor of driver training.
   (a) Talk on driving knowledge.
   (b) Inquiry into and explanation of driving practices.
   (c) Physical limitations test.
   (d) Repair shop observation.
5. Road test for experienced drivers.
6. Skill and aptitude tests.
   (a) Training and practice at training area.
   (b) Road test (compulsory for new drivers).
7. Scoring and grading.
8. Follow-up on route or job.

The first man the applicant meets is a key man in charge of sales personnel in our main office. All drivers, of course, must be able to meet the public and sell our merchandise. This key man interviews the applicant, queries him with the object of determining how he will fit into our business. If the applicant passes this test he is then sent to the manager of a branch where a driver is needed.

The branch manager next interviews the applicant. At this interview our "Driver Applicant Control Card" (Fig. 1, pg. 54) enters the picture and from this point right on down the line, this card accompanies the driver applicant.

On the back of the Control Cards the following self-explanatory instructions to the branch manager are printed.

HOW MUCH DO YOU KNOW

—A 10-Minute Quiz

1. The most common factor in fatal auto accidents is: (A) skidding; (B) speed excessive for conditions; (C) defective brakes; (D) defective roads.

2. "Riding the clutch" will result in: (A) better control of the car while descending hills; (B) excessive clutch wear; (C) easier gear shifting; (D) greater momentum.

3. When meeting approaching vehicles at night, use: (A) the lower headlight beam; (B) the upper headlight beam; (C) the parking lights; (D) the upper and lower beams alternately.

4. To bring a car out of a skid, the driver should: (A) pump the brake pedal lightly; (B) turn the steering wheel in the direction in which the rear end of the car is skidding; (C) race the motor; (D) push the clutch pedal down.

5. When approaching a railroad crossing, you should: (A) increase speed; (B) drive slowly; (C) slow down; (D)come to a stop, then proceed with caution.

6. When parking on the right, parallel to the curb on a downgrade, it is best to: (A) turn steering wheel to the right until the right front tire touches the curb; (B) turn steering wheel to the left until the left front tire touches the curb; (C) keep front wheels parallel to the curb; (D) place gears in neutral.

7. Spinning of the rear wheels, or loss of traction when starting on icy roads, is lessened by: (A) starting the car in second gear (B) starting abruptly in any gear; (C) starting the car in first gear; (D) engaging the clutch quickly. 8. When meeting or passing a car with glaring headlights, a driver should; (A) watch the center line of the highway; (B) turn on bright lights; (C)

Program Features Safe Driving

QUIZ

ABOUT SAFE DRIVING? —

shield eyes with hand or sun visor; (D) watch the right side of the road.

9. The primary function of the hand-brake is to: (A) stop the car quickly in an emergency; (B) save the footbrake when descending long hills; (C) momentarily check speed when slowing the car; (D) hold a parked car in a stationary position.

10. You should depend primarily on tire chains to: (A) prevent skidding; (B) increase traction; (C) make possible quick stops on slippery surfaces; (D) reduce tire wear caused by spinning wheels.

11. If you are driving at the speed limit and a driver behind you sounds his horn to pass, you should: (A) decrease speed slightly and give way to him; (B) block him to let him know he is already driving at the speed limit; (C) speed up and get out of his way; (D) let him pass and overtake him.

12. Most traffic accidents are the result of: (A) mechanical defects in automobiles; (B) defects in the road; (C) errors in judgment of drivers; (D) adverse weather conditions.

13. When driving any car for the first time, you should: (A) examine the clutch for possible wear; (B) lock the door from the inside; (C) back up to see if the reverse works; (D) try the brakes to see if they work.

14. When following a truck downhill, you should: (A) stay far enough behind the truck so that it doesn't block your view of oncoming traffic; (B) stay close to the rear of the truck so that no other car from behind can get between you and it; (C) blow your horn (daytime) or flicker your lights (night-time) to let the driver know you wish to pass; (D) speed up and dart around the truck.

15. If you are involved in an accident causing injury to persons, you should first: (A) notify the police; (B) assist the injured; (C) check your car; (D) notify insurance company.

16. When driving around a curve, you should: (A) accelerate at the beginning of the curve, and apply the brakes just before reaching the straight-away; (B) slow down before reaching the curve, depress the clutch and coast around the curve; (C) slow the car down with the engine before reaching the curve, start around the curve, then accelerate just before reaching the straightaway; (D) start into the curve at the speed the car is being driven and apply the brakes only if necessary.

17. Night traffic on the roads is much less than day traffic, but night accidents in proportion to the traffic are far more numerous than day accidents. The main reason is: (A) poor visibility; (B) drunken drivers are more numerous; (C) pedestrians walk on the wrong side of dark roads; (D) people drive faster at night.

18. In preparing for a right turn, the most important thing to do is: (A) drive in the extreme right lane; (B) check your mirror for conditions in the rear; (C) blow your horn lightly; (D) signal with your stop light.

19. In bringing a car to a complete non-emergency stop from a speed in excess of 30 miles per hour: (A) depress the clutch and brake pedals at the same time; (B) depress the clutch pedal first, then depress the brake pedal; (C) depress the clutch and brake pedals together, then place the gear-shift lever in neutral; (D) depress the brake pedal first and depress the clutch pedal later.

20. When driving in fog at night, you can increase visibility by using: (A) the upper headlight beams; (B) the lower headlight beams; (C) the parking light; no lights at all.

"TO MANAGER: After interview this card must be filled in and sent to the next department in line whether the applicant is accepted or not.

"If applicant is accepted by you, send him to the Medical Examiner and if O.K.'d by the doctor send him to the Safety Department and they, in turn, will direct him to the Driver Training Department.

"These Control Cards will be kept on file at the office of the Supervisor of Training."

Space is allowed on the front of the card for date of interview, name and address of applicant, his age, weight, color and whether married or single.

The item marked "Position Wanted" tells us whether the man wants to drive a heavy over-the-road truck; a tractor and trailer or a light retail delivery truck. The next question, "AT," means the branch at which the driver will be located. Then follows data telling whom the applicant was interviewed by, date, whether the applicant is OK or not and reason for rejection, if any.

As the applicant goes down the line, from branch manager, to safety director to driver training supervisor, each of us signs the control card, showing date and reason for rejection, if any.

Our doctor's examination is strict. We do not employ a company doctor for this nor do we allow the applicant to use his own doctor. We use two Detroit clinics, one on the East side, the other West side. These clinics

(TURN TO NEXT PAGE, PLEASE)

Safe Driving Quiz

(CONTINUED FROM PAGE 53)

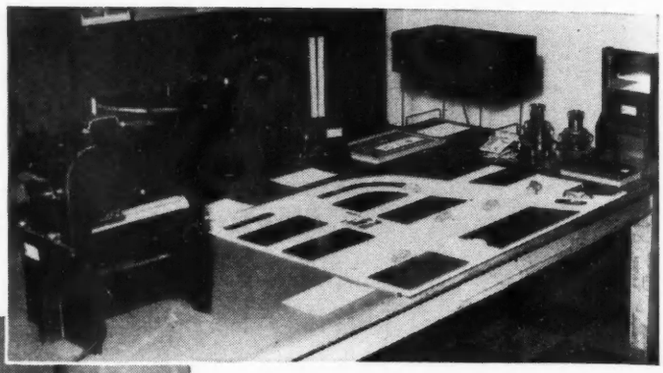


FIG. 2 *(above) Safety equipment includes testing devices for, l. to. r., depth perception, field of vision, steadiness, glare resistance, reaction time and color blindness*

FIG. 3 *(left) Driving board, made from 3 x 4 ft Masonite, permits plotting and review of any type accident*

are thorough, impartial and render an impersonal medical interpretation of the applicant's physical condition.

Safety Indoctrination

NOW the applicant is ready for the next step; indoctrination by the Safety Department. This is where instruction starts for the express purpose of indelibly impressing on the driver applicant things to do and not to do when driving. This instruction period is calculated to allow us to become acquainted with the applicant and he with us.

We have been conducting this indoctrination course for three years now and we believe that it has helped a good deal to promote both conservation of equipment and good-will.

Our program begins in the morning and usually runs all day long with a break at noon when we take the applicant or applicants out to lunch at company expense. While we will indoctrinate a single applicant and devote a whole day to him we have often had groups of from three to eight individuals. We prefer groups because a group seems to talk more freely; asking questions, discussing driving hazards and accidents, and questioning as to proper driving procedure. In this way they become very interested which has the effect of making our indoctrination something not soon to be forgotten. Of course

(TURN TO PAGE 146, PLEASE)

FIG. 4 *Accidents photos and statistics on board serve as grim reminders*

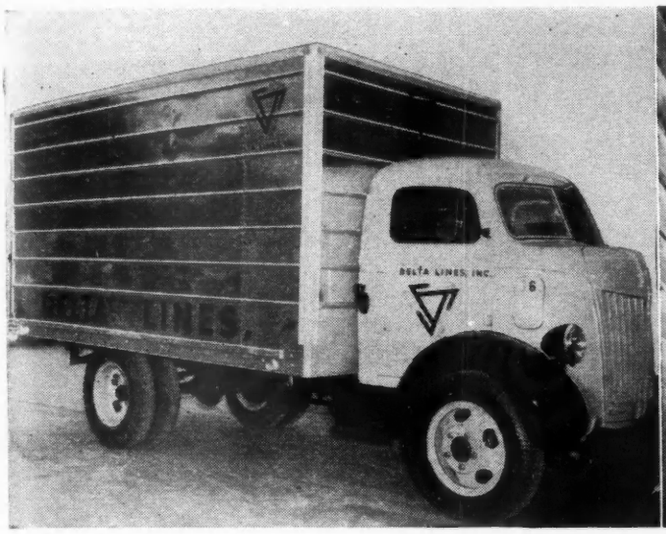
Driver Applicant Control Card — Date 194

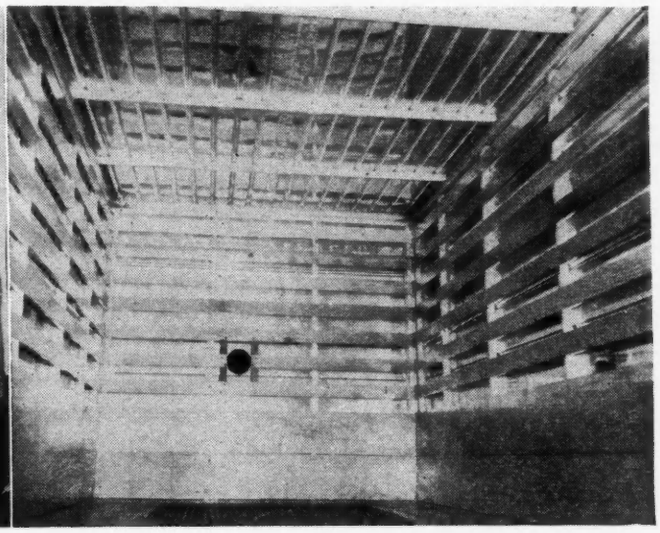
Mr.	Address				
Town	Zone	State		Tel.	
Age / Weight	Color	Married		Single	
Position Wanted		At			
Interviewed By	Date	O.K.	No	State Reason	
Manager					
Safety Director					
Supvr. Driver Training					

REMARKS:

Instructions on reverse side

FIG. 1 *Driver Applicant Control Card gives basic data concerning both applicant and all interviews involved in selection processing*

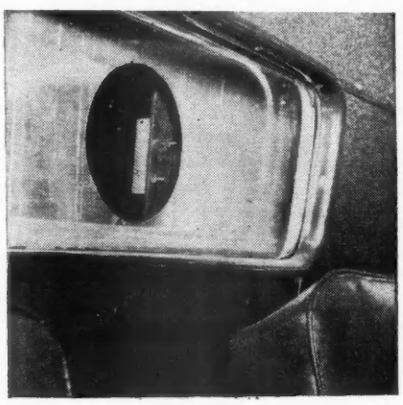




ABOVE *Finished 14-ft body is good-looking, has smooth outside surface*

Wood slats and diamond plate floor provide both strength and protection

BELOW *Opening in front fits flush with cab and provides view to rear*



Fleet-Built BODIES

14-ft. aluminum bodies are quickly built, weigh 1376 lb., cost just under $1000

by H. D. YOUNG

Shop Superintendent, Delta Lines Inc., Sacramento

WE HAVE JUST completed our fifth light-weight aluminum body, using prefabricated panel assemblies, and our experience to date leads us to believe that these quickly put-together jobs are the ideal answer for medium hauling trucks.

The bodies are 14 ft long, 80 in. wide and 6½ ft from floor to roof. The complete assembly, floor and all, weighs 1376 lb, about 35 per cent lighter than our old steel bodies. We mount them on standard 1½-ton c-o-e chassis.

The aluminum sections come in four pieces, front end, two sides, and the roof. The cast aluminum corner posts come to us already riveted on the panels, the two front ones on the front panel, the rear ones on the end of the side panels. We use a canvas curtain on the rear and build our own floors with diamond plate steel facing.

A breakdown on cost runs as follows:

Aluminum sections	$629.00
Diamond plate	26.86
Lumber & Milling	81.86
Tax	21.23
Freight	11.19
Steel cross members	21.24
Cherry Rivets	18.00
Miscellaneous material	20.00
Decals & wood filler	10.00
Labor charge	150.00
	$989.38

Construction Details

TO erect the body we lay two 14-ft Douglas fir sills, 3 x 6 in., on top of the truck frame. On top of these sills we lay 3/16 x 2½ x 2½-in. channel iron, using about 14 wood screws to keep the channels in place. The angles and sills frame are clamped together with three ¾-in. U-bolts on each side.

Next we place seven cross members, spaced at an equal distance apart, and electric weld them to the angle irons on the sills. These cross members are of 3/16 x 2 x 4 in. pressed channel iron, 89⅝ in. long.

Now we set up the aluminum side panels and the front end panel. This is accomplished by placing the bottom angle which is fastened to the inside of the rub rails of side panels

(TURN TO PAGE 166, PLEASE)

FREE PUBLICATIONS

USE POSTCARD–NO STAMP NEEDED

A selected list of the latest literature—catalogs, pamphlets, charts—chosen to help fleetmen improve operation and maintenance

L146. Spring Service

This 30-page, page pocket size booklet on leaf spring troubles has been prepared expressly for the fleet operator as a guide to better spring service and inspections. Causes and cures of common spring troubles are highlighted in the booklet.

"Tips on Spring Inspection and Service" is the result of the experiences of prominent fleet operators and the opinions of spring engineers, as published in leading trade magazines.

Special instructions cover U-bolt and spring clip maintenance, and lubrication practices. One section shows how to inspect the assembly for signs of weakness, looseness or wear.

The author shows why adding a leaf to increase capacity is a dangerous practice and provides eight important points to consider in a systematic check of the spring assembly. A section on driving tips will be found valuable for use in training drivers.

This spring guide should be in the hands of all who inspect or service vehicles. Write L146 on the free postcard for a copy.

L147. Overhaul Manual

"Successful Reboring" is the title of this newly developed 12-page publication now available to fleetmen and their mechanics. Prepared as a practical guide to cylinder wall refinishing, the manual takes up such subjects as surface treatment, grit, removal, honing and surfacing.

In addition, a list of conditions responsible for a longer lived engine repair job are discussed in detail. The manual shows how to fit pistons, rings and piston pins, while tips on piston skirt beveling, piston lubrication, and how to break in a newly rebuilt engine will help the mechanic in his work.

Ten steps on engine rebuilding will do much to insure a smooth, free running engine. And finally, the manual discusses piston rings as the key to long satisfactory life from rebore jobs.

For a copy of his valuable maintenance guide, write L147 on the accompanying postcard.

L149. Driver's Guide

A concise treatment of the fundamental rules of safe driving especially prepared for truck and bus drivers is now available to the fleet field in the form of a 40-page, pocket size booklet entitled "The Commercial Vehicles Drivers' Guide Book."

Prepared to assist the driver maintain the high standards of his profession, the booklet is intended to serve as a refresher on some rules of the road that the driver needs but may sometime neglect.

Divided into four sections, the guide book discusses the attitude and physical condition of drivers, traffic laws and regulations, motor vehicle equipment, and finally, traffic signs, signals and markings.

Within these pages the reader will find such topics as Good Rules to Follow in Right of Way Decisions; Conditions Which Should Govern Speed; Ways to Prevent Skids; Proper Loadins and Proper Load Distribution, to name a few.

This booklet is a training course in itself. It should be added to the required reading list for drivers in every fleet. Write L149 on the free postcard for a copy.

L148. Regulator Manual

A 20-page, illustrated manual containing up to date information in the operation, checks and adjustment of the various types of Delco-Remy regulators is now available to the fleet field. It should be in the reference files of every maintenance shop.

All material is presented clearly, while diagrams and schematic drawings show just how each unit operates. Instruction covers the proper procedures for adjusting the current regulator, the relay, the voltage setting. The new four and five-unit regulators are discussed in detail.

The last section of the manual is devoted to service test specifications applicable to all types of Delco-Remy regulators. This handy guide will supplement the vehicle manual and provide all the necessary information for satisfactory service and operaton. Write L148 on the free postcard and add it to your files.

L150. Battery Manual

Here is an outstanding publication on storage battery operation, care and service. It should be highly priced in the fleet shop. This 16-page manual begins with a description of the battery, showing how to install the unit, how to use the hydrometer, how to prevent corrosion, etc.

Maintenance suggestions cover the practices of adding water, cleaning the battery, maintaining proper charge. Diagrams and cut away views show the use of instruments. The final section is devoted to freezing point data for various stages of charge, and a comprehensive listing of common battery troubles—with their causes and cures.

This publication will be ideal for the training of mechanics. Seasoned men as well will find interestinf material in the manual. L150 on the free postcard will bring the booklet to you.

NEW PRODUCTS

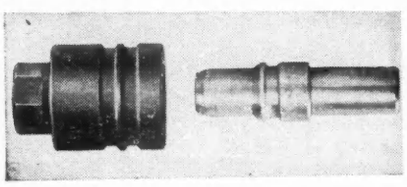
USE POSTCARD—NO STAMP NEEDED

The newest in replacement parts, accessories, shop equipment, supplies—illustrated and described in brief for the fleetman

P182. Vacuum Coupling

A new and improved hose coupling designed for connecting vacuum lines on tractor-trailer combinations is now available to manufacturing and service sales customers of the Bendix Products division, Bendix Aviation Corp., South Bend, Ind.

These units, now in production, do not depend on taper for sealing but employ an even larger sealing surface than on previous models and a positive quick acting locking device.



The new couplings, which are supplied in sizes ½ and ¾ in., are interchangeable with any combination of the older type and when installed as complete new units are said to form a positive leak proof connection under any and all operating conditions.

Use Free Postcard for More Details.

P183. Valve Grinder

The new Sioux wet valve face grinding machine developed by Albertson & Co., Sioux City, Iowa, incorporates the following features and specifications: quick-acting roller chuck, ¼ to 11/16 in. capacity; new chuck spindle and floating aligner; reversible left wheel for extra capacity; 1/3 hp motor; removable coolant tank for easy cleaning; graduated feed screw; valve and grinding attachment and gages; as well as a rocker arm grinding attachment.

Weight of the machine is 237 lb. Price $349.50.

Use Free Postcard for More Details.

P184. Pin Fitting Machine

Tobin-Arp Mfg. Co., Minneapolis, Minn., has developed a new machine for fitting pins in connecting rods and pistons of all internal combustion engines.

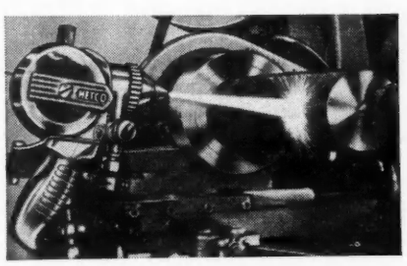
It bores the wrist pin bushings and pin holes in the piston. It holds the piston and rod by air and hydraulic pressure. The piston or rod can be located in the machine in a few seconds and centered with an accurate expanding mandrel used on the inside of the bushing or piston holes —the clamping arrangement holds the rod or piston in the exact position it is centered.

The cutter revolves at a high speed and with the hydraulic feed produces a perfectly round hole, glass smooth. Cutter is set with the use of a comparator wherein the piston pin is used as a gage. Comparator is graduated to .0001 so operator can select the proper clearance or press fit.

Use Free Postcard for More Details.

P185. Metal Spray

A feature of the new "Light Duty—Low Air" L Gun just announced by the Metallizing Engineering Co., Inc., Long Island City, New York, is that only 10 cu. ft. of air per min. is required for metallizing.



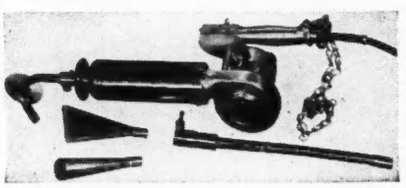
New turbine construction requires only one-third the power, making a large compressor unnecessary. The new nozzle requires low consumption of acetylene and oxygen. A turbine control requires only one adjustment for the entire range of metallizing wires. The "Light Duty—Low Air" L Gun weighs only 4 lb., 2 oz.

Use Free Postcard for More Details.

P186. Heat Gun

A new and improved electric heat gun designed by Sprayer Corp. of America, Evanston, Ill., develops a blast of dry air at a temperature of 640 deg. F.

This heat gun makes grease run like water from differentials, thaws radiators and brake drums, and dries out distributor heads, electric cable and all parts of the electrical system.



Light in weight, it plugs into any convenient ordinary electric outlet. It is equipped with a 1/8 hp universal motor.

The nozzle is provided with another opening well above the nozzle hole. This permits a steady stream of air to flow freely to the heating element and eliminates possibility of burning out due to a grease clogged nozzle. Motor and heating element are completely enclosed within light-weight aluminum housings which give adequate protection for everyday use; convenient toggle switch in handle, supplied with 20 ft. of approved rubber cord and unbreakable plug.

Use Free Postcard for More Details.

P187. Brake Cylinder

The new Mico power brake cylinder, developed by Minnesota Automotive, Inc., Minneapolis, Minn., is said to produce more than twice the amount of brake pressure of ordinary cylinders. This unit is a two-stage cylinder which transfers in mid-action from a conventional or low pressure cylinder. The power cylinder relieves all pressure from the low pressure piston and transfers the braking load to the high pressure piston, delivering twice the line pressure.

Of simple construction, the cylinder can be installed to replace the regular master cylinder in a matter of minutes.

Use Free Postcard for More Details.

(TURN TO NEXT PAGE, PLEASE)

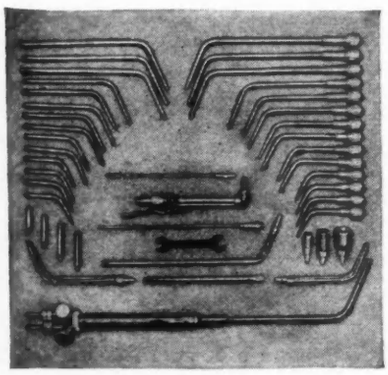
NEW PRODUCTS

USE POSTCARD—NO STAMP NEEDED

(CONTINUED FROM PAGE 57)

P188. Welding Torch

The Air Reduction Sales Co., New York, has announced the availability of a new oxyacetylene welding torch, the Airco 800. Although the new torch has a conventional weight of 1½ lb. and is only 11½ in. long, it has a capacity for operating single flame welding tips from Nos. 0-13 inclusive as well as multiflame tips up to No.



15. This means that the new Airco 800 is suitable for almost any welding job from the thinnest sheet metal up to 1½ in. in thickness.

Use Free Postcard for More Details.

P189. Ignition Seal

A water repellent ignition seal developed by Sherolite Products, Inc., Caldwell, N. J., is to be distributed by GMC Truck & Coach Div. The Seal functions primarily as a protective coating on metals, wires, and electrical systems against such corrosions and damages as are effected by water, condensation, leakage, acid, fungus and rust. Sherolite is a thin, workable liquid applicable to metals and electrical wires or connections by spraying or brushing at room temperature. It dries tack-free in 8 min., and hard in 45 min., forming a lasting coat, the manufacturer states.

Use Free Postcard for More Details.

P190. Lubricator

A new high pressure lubricator designed for fast, positive lubrication of vehicles, is announced by Industrial Machine and Supply Co., Pittsburgh, Pa.

Known as the SL-104 High Pressure Chassis Lubricator, it is equipped with an air-operated double-acting pump which builds up a 50 to 1 pressure ratio. It pumps grease on both the up and down strokes.

The SL-104 lubricator has a minimum number of working parts and therefore is capable of long life. Piston and cylinder are built of a special hardened alloy. No boaster control valve is now necessary. The SL-104 lubricator can be used with 400-, 100- and 25-lb. original refinery drums.

Use Free Postcard for More Details.

P191. New Inner Tube

Akron, O., Feb. 11—Seiberling Rubber Co., Akron, Ohio, has announced the reintroduction of its "sealed-air" puncture-sealing inner tube for automobiles and trucks.

The tube, which utilizes a layer of soft, plastic gum held in place by strong rubber bulkheads, to seal punctures caused by nails, glass, and other road hazards, has been redesigned to eliminate excess weight.

To repair a puncture, the car owner need only remove the nail and the tube repairs itself as the soft gum flows into the injury. Rubber bulkheads that hold the sealing gum in place inside the tube prevent the gum from moving out of place, making its sealing action less effective and throwing the tire out of balance, according to the company.

Use Free Postcard for More Details.

P192. Car Wash

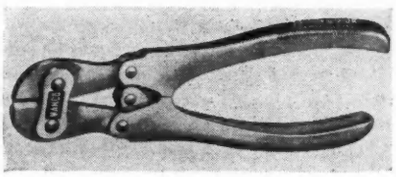
The Magnus Chemical Co., Inc., Garwood, N. J., has developed a new product for washing bodies of automobiles, trucks and buses—Magnus Carfoam This new synthetic soapless car washing material is available in powdered or liquid forms.

Magnus Carfoam is a "shampoo" type cleaner, producing thick, heavy, clinging suds which are appiled to the body of the vehicle being washed. It loosens and floats away dirt, grime and oxidized products. It does not contain fats, oils or other materials to form a film on the car after washing. Surfaces or finishes cannot be harmed by it, the manufacturer states.

Use Free Postcard for More Details.

P193. Hand Cutter

The Manco Mfg. Co., of Bradley, Ill., has announced a new cutter called, the Manco Junior, designed to fill the need for a cutting tool between the wire cutting plier and the higher priced bolt cutter. Fifty tons pressure at the handles affords two tons cutting power at the jaws, yet its convenient tool box size is only 12 in. overall.

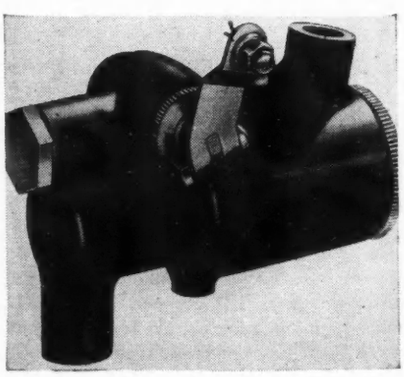


The cutter can be used to cut mild steel bolts up to ¼ in., rods, screws, rivets, nails, fencing of any hardness up to heat treated or hardened steel.

Use Free Postcard for More Details.

P194. Ratio Changer

The Wagner Hydraulic Ratio Changer, manufactured by the Automotive Division of Wagner Electric Corp., St. Louis, Mo., is designed to reduce braking pressure on front wheels only, to enable increased braking and steering ability. Easy to install, this ratio changer is connected into the hydraulic brake fluid line leading from the master cylinder to the front wheels.

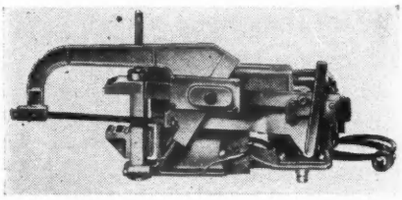


When slippery roads are encountered, the unit is put into action by means of a control button mounted on the dashboard. The ratio changer then operates automatically to reduce braking input to the front brakes. This reduced braking is said to prevent much of the tendency of front wheels to skid when the road is slippery.

Use Free Postcard for More Details.

P195. Power Hack Saw

Hand-I-Hack is a light weight portable power hack sawing machine which can be easily carried to the job with one hand and operated from any 110 volt, a.c. outlet. Manufactured and sold by Lipe-Rollway Corp., Syracuse, New York. The sawing action eliminates the use of weight and is fully adjustable for cutting in a range from solid tough materials to very thin-wall tubing etc. The work holding vise capacity is 3 in. x 3 in. and will hold 2½-in. iron pipe. The vise is swivel mounted and calibrated for cutting accurate mitres.



Sawing can be done in any position. The vise can be clamped to work such as a vertical pipe or tangent brace and cut it off at right angle. It will even cut upward when necessary.

Use Free Postcard for More Details.

P196. Wipe on Enamel

The Lincoln Products Co., Brooklyn, N. Y., has produced an auto paint called Nu-Kote, which is easily applied simply by wiping it on.

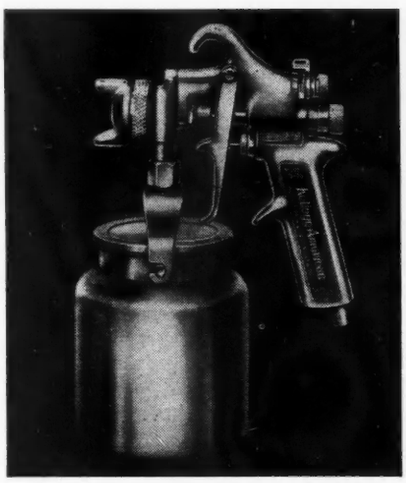
Nu-Kote goes on smoothly and quickly, leaving no unsightly streaks, brushmarks or lapmarks, the company states.

Use Free Postcard for More Details.

P198. Spray Gun

A new paint spray gun has been announced by American Brake Shoe Co., Kellogg Division, Rochester, N. Y.

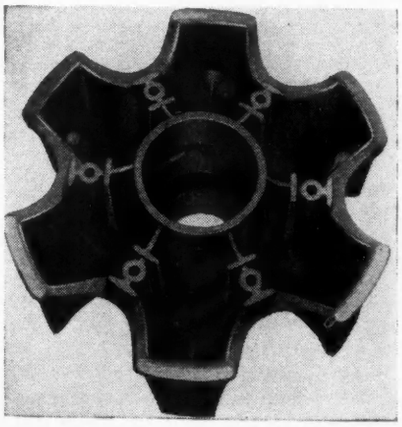
Smoother, higher-gloss finish is said to be produced by finer atomization, and more even paint distribution is made possible by a more uniform flow of air and paint. Detrimental effects from air pressure drop and eddy currents have been eliminated by designing ample air passages in the gun body, and by providing for precision, uniform flow and size of air streams from both wing jets and center orifice. The result is shallower valleys between finer microscopic paint globules and more uniform distribution, according to the company.



Use Free Postcard For More Details.

P199. Lighter Wheel

The Permold Co. has placed in production a permanent mold aluminum alloy spoke type trailer wheel. Design and application of this new wheel was developed in cooperation with The Dayton Steel Foundry Co. The basic feature of this development lies in the weight saving up to 55 lb per wheel assembly of 20-in. wheels. The Permold aluminum alloy



wheel, illustrated here is 4 7lb lighter than the cast wheel and 21 lib lighter than a cast auminum wheel.

P200. Floodlight

A heavy-duty, service station floodlight with asymetric beam for uniform illumination over the entire area with no light wasted is announced by Westinghouse Electric Corp. The new type VEK-16 floodlight has a white vitreous enamel inner surface with a high reflection factor. An

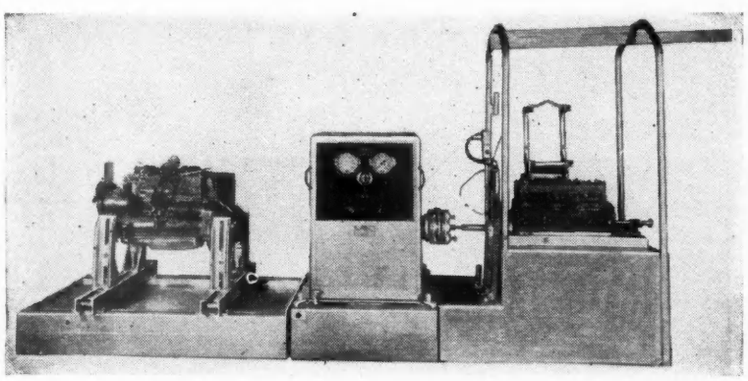
auxiliary reflector of Alzak processed aluminum further controls the light rays for even distribution from well behind the pole to from 60 to 70 ft. in front of it.

Plain, stippled, or rectilinear spread lenses are available to provide several different beam spreads for the special requirements of any service station. Stainless-steel clamps hold the lens door tightly in place providing complete protection against rain, snow, sleet, and dust.

The new floodlight is designed for use with PS-52 bulb incandescent lamps from 750 to 1000 watts ratings or with the high-efficiency, 400-watt, mercury lamps that produce approximately twice the amount of illumination for each watt of power consumed as the incandescent types.

(TURN TO PAGE 154, PLEASE)

P197. New Line of Engine Dynamometers



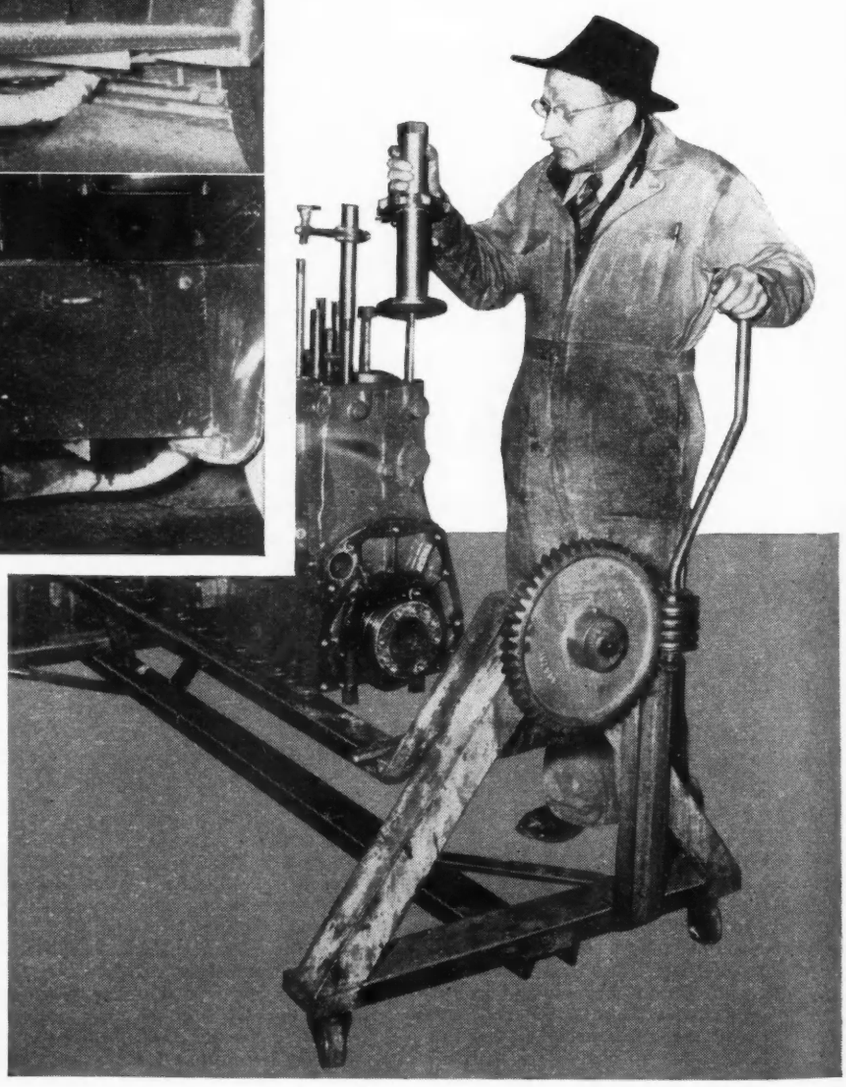
Clayborne Mfg. Co., Chicago, is now in production of a new line of engine dynamometers, known as the No. 4400 and No. 4500 series. These dynamometers consist of a central or cabinet unit, providing a series of chassis or ends, which may be selected to meet the requirements of the individual shop and the shop arrangement.

The No. 4400 Cabinet Unit includes a 200 hp, hydraulic, torque absorption unit. The No. 4500 Cabinet Unit includes a 400 hp, hydraulic, torque absorption unit, accommodating any built-up engine. In addition to the instruments, the cabinets contain an electric motor to provide for the oil run and starting. These cabinet units, on a special ball bearing mounting, will turn through 180 degrees and can quickly be clamped in various operating positions.

MAINTENANCE

JULIUS GAUSSOIN, who founded, owns, and operates Silver Eagle, has always believed that there are two kinds of maintenance. Our shop program is built around this theory.

The first kind of maintenance is the type that you generally think about — daily service and checks, periodic checks, following through with a regimented PM program, handling all kinds of repair and overhauls.



TOP *Secret of Silver Eagle's quiet diesels is 8 x 36 in. expansion chamber mounted ahead of muffler. Exhaust stack was tapered from 4 to 3½ in.*

ABOVE *Same vehicle with standard exhaust and muffler showing standard equipment muffler and exhaust system*

RIGHT *Special reamer designed by Silver Eagle to true-up sleeve seats*

...Beyond the Book

J.E.ROLLWAGE, Mgr. & Treasurer

SAM HAYS, Supt. of Maintenance

Silver Eagle believes that good maintenance should improve trucks as well as keep them rolling. Muffled mufflers, straighter air lines, better seals are among developments

by SAM HAYS and J. E. ROLLWAGE

Silver Eagle Company, Portland, Oregon

Our program for this type of maintenance is pretty much the conventional one followed by operators throughout the country. We are strong believers in this kind of maintenance in so far as it goes.

The second kind of maintenance involves actual improvement in the equipment that the manufacturer gives us. If we can make a mechanical correction that will give us a lower operation cost, a safer operation, or better our public relations, that correction becomes our next maintenance study and job.

Our improved fifth wheel which we have built into all of our units and which has been on the market for some time, is an example of this. Lately we have been working on a number of other improvements which we shall describe briefly here.

Muffled Thunder

IN the West we do not have thunder storms as they do in the Middle West and the East, unless they are machine-made ones. Out in this country there is no thunder comparable to that of a diesel pulling a load down a highway at 50 mph. What that noise does to a public relations program is not enterable on the black column of anybody's ledger.

To correct this Mr. Guassoin, in connection with the Equipment & Maintenance Committee of the Oregon Motor Transport Association, made a study of the exhaust speed on one of our diesel rigs. The speed of output of exhaust was computed at 1200 mph. Super-sonic speed is 750 mph. At 1200 mph the exhaust fumes were cracking the atmosphere. The noise was actually machine made thunder. And incidentally it is almost as much of a problem with very large gasoline engines as it is with diesels. It was concluded that the prime cause of exhaust pipe cracking

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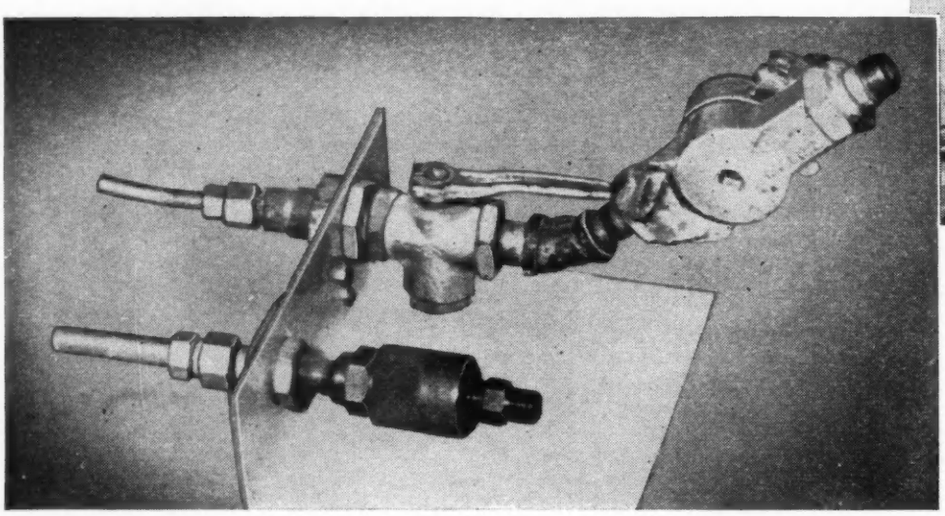
LEFT ***Threaded metal bushing used as oil slinger in place of leather seals or worm or pinion shafts***

Maintenance ... Beyond the Book

Continued from page 61



ABOVE ***Push-in couplers and streamlined piping installed between truck and full trailer***

LEFT ***Push-in coupler is similar to type used in shop air systems. Here it is compared with the standard "glad-hand"***

noise lies in the speed and energy with which the charge of burnt gas, under accelerating and load conditions, leaves the exhaust pipe system. If the sound wave front of these recurring charges are carried to the end of the exhaust pipe a very annoying noise results. This result will occur with a straight pipe, or with a short conventional muffler in which the baffle plates have burnt out or even with large engines in new trucks using standard production mufflers.

After much experimentation an exhaust receiving chamber located between the engine exhaust manifold and a conventional through-flow muffler was designed. The exhaust receiving chamber is large enough to permit the high speed sound wave front to slow down and to smooth out the peaks and valleys between the succeeding charges from the other cylinder. In addition, the receiving chamber dissipates some of the heat and energy of the exhaust and this results in less corrosive action on the interior part of the conventional muffler, prolonging their effective life greatly.

The chamber as developed for a 200 hp diesel engine is 8 in. in diameter and 36 in. long. It is mounted alongide and beneath the tractor's running board. The 4-in. exhaust pipe from the engine manifold is brought into the front end of the receiving chamber and a 4-in. pipe connects the rear end to the conventional muffler mounted vertically alongside the cab.

With this arrangement back pressure was reduced, making it practical, without an increase in back pressure at the engine, to taper the 4-in. tail pipe from the muffler to a 3½-in. opening to the air. This tail pipe taper appears to further smooth out the exhaust impulses and what is equally important, delivers the exhaust gases in a relatively steady stream farther up into the air above the roof of the trailer body. By so shooting the exhaust higher into the air any smoke and acrid fumes are better dissipated into the atmosphere and cause less annoyance to other users of the highway.

The exhaust receiving chamber is subject to high heat. For this reason and in order to obtain adequate service life it is recommended that the chamber be made of at least 16-gage steel with better than mild steel corrosion resistance. It is probable that the use of aluminized steel, porcelain enameled steel, or stainless steel may be used.

We have stopped making thunder. The first payoff came from the drivers and not the public. Now that we have eliminated the noise several of our drivers have asked to have radios installed in the cabs. With the conventional muffler a radio, regardless of how loud you could play it, would be just so much baggage. As a matter of fact some of our drivers have ruined crankshafts by running with burned out rods. They said they couldn't hear them.

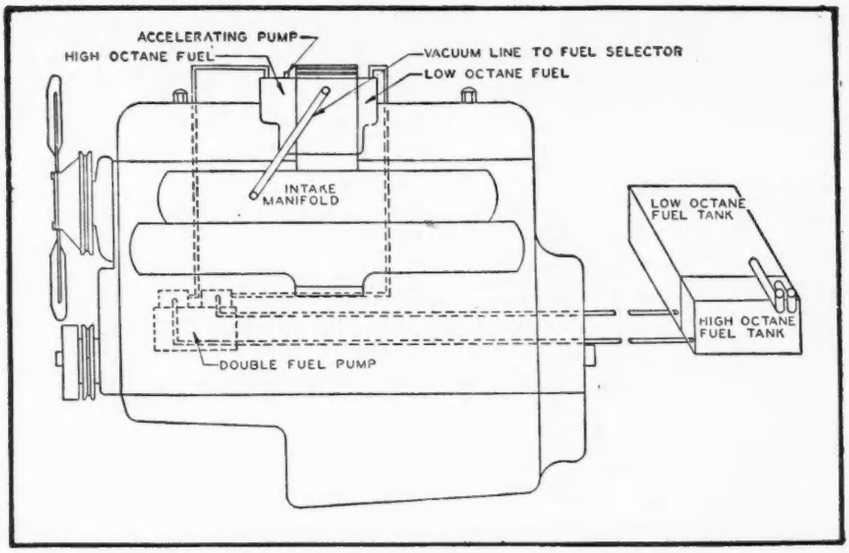
Simplified Air Lines

AIR brake lines between trucks and trailers have for years been connected by a so-called "Glad-Hand." Two valves are required for this connection. If either valve is turned off accidentally there is no air on the trailer.

"Why use a 'Glad-Hand' coupler if a simpler one will work just as well and eliminate the valves and the chance of pulling out with no air for the trailer," Mr. Gaussoin reasoned.

(TURN TO PAGE 142, PLEASE)

EDITOR'S NOTE: Readers may be inclined to compare the features of the dual-fuel system described herein with the Thompson Vita-Meter anti-detonant injection system described in the January issue beginning on page 46. While it is conceivable that operating and maintenance economies for present-day engines, derived through the use of high-burning-quality straight-run gasolines, could be accomplished with the dual fuel system, Socony-Vacuum engineers made it plain that present plans for the dual-fuel system were concerned only with its use in connection with high-compression engines of the future.



Schematic layout of dual fuel system using two tanks, double fuel pump and specially-built dual carburetor

Dual-Fuel System

Experimental device provides automatic, vacuum-operated selector for two fuels

An automatic dual-fuel system which would assist in solving the high octane-number gasoline problem for high-compression engines of the future, has been developed by the Socony-Vacuum Research and Development Department, Paulsboro, N. J.

The system automatically meters two different grades of fuel in accordance with engine requirements as determined by manifold pressure. A high octane-number gasoline of sufficient anti-knock quality to meet peak requirements during full-throttle operation is consumed during only a fraction of the driving time. The other fuel, lower in anti-knock quality for normal cruising, is delivered to the engine the remainder of the time. Thus, the dual-fuel system would minimize the amount of high octane-number gasoline required to completely satisfy the anti-knock requirements of an engine.

An experimental version of the dual-fuel system, incorporating basic ideas of a two-fuel carburetor now being built, was demonstrated successfully on a 1947 Cadillac sedan by Socony-Vacuum engineers. The fuels used in the demonstration were a synthetic laboratory straight-run gasoline of 40 octane-number and a gasoline of about 76 octane-number. The 40 octane-number fuel is not available commercially, but was selected to give the desired octane spread. With the experimental installation on the 1947 Cadillac, consumption of the high octane-number gasoline did not exceed 20 per cent of the total, and complete freedom from knock without change in car performance was obtained.

Two Complete Systems

THE experimental dual-fuel system consisted of two separate fuel tanks, lines, pumps and carburetors—a complete fuel system for each grade of gasoline. The low or high octane-number fuel was selected according to the engine load as determined by the intake manifold pressure. The control during the demonstration was arranged so that the system shifted automatically to the high octane-number fuel when the manifold pressure dropped below 4 in. Hg. absolute. Similarly, when the engine manifold rose above 4 in. Hg., the high octane-number carburetor was shut off and the engine operated on the low octane-number fuel. The accelerating pumps on both carburetors were supplied with high octane-number fuel. Thus, the higher grade of gasoline was immediately available for sudden acceleration.

A special carburetor for handling both fuels, which is now being built by a prominent carburetor manufacturer, will greatly simplify the installation. The arrangement will resemble a conventional carburetor in appearance, except that it will be somewhat larger in size since it will contain two separate float chambers. The manifold - vacuum - operated control system will be built into the carburetor, and will permit adjustment of the control setting and fuel flow. In this case also, the accelerating pump will

(TURN TO PAGE 136, PLEASE)

Ted Rodgers Sums Up

Western Problems

Transmissions, brakes, mufflers, diesel smoke and horsepower requirements get going over at Detroit SAE meeting

APPROXIMATELY 500 people attended a meeting of the Detroit Section of the Society of Automotive Engineers on Feb. 16 to hear Ted V. Rodgers, Board Chairman of ATA, discuss transportation problems in the Western States. On certain aspects of the subject there was lively discussion from the floor.

Better Transmissions

AFTER a brief introduction to the problems of Western operation, which include such conditions as hauling 72,000-lb GVW loads over continuous grades for as long as 20 miles, Mr. Rodgers got right down to tickets. Because of the length of the hills, rather than their grades, there is great need, said Mr. Rodgers, for improved transmissions providing a great number of steps without the dangerous burden on the driver of double shifting. A development in this line by Julious Gaussoin was mentioned with favor.

Hoy Stevens of ATA said later that operators would prefer manual transmissions to torque converters because of the efficiency loss on long grades. However, a lot of improvement must be made in conventional transmission set-ups to relieve drivers of the nerve racking job of constant double clutching. One excellent solution is the adoption of the modern two-speed axle with power shift. Another device is the proposal on the West Coast to design transmissions with closely spaced gear ratios—in steps of around 1.25 to 1. This has been proposed for the first five gears of main transmissions currently in use.

Hoy Stevens also remarked that West Coast operators do not like superchargers because of their complication, cost, and difficult maintenance.

Faster Brakes

DELAYED action of braking systems on long vehicle trains was the next target of Mr. Rodgers paper, followed quickly by a discussion of the dangers of front wheel braking on the same type vehicles on mountainous terrain. As is well known, this is a matter now before the ICC and the subject was apparently too hot for open debate at the meeting.

Longer-Life Mufflers

MR. RODGERS then took a crack at standard equipment mufflers stating that operators who spend $10,000 to $12,000 for a vehicle expect more than a $3.79 "can" for a muffler. He pointed out that large engines, both gasoline and diesel, presented their most troublesome noise problem during the acceleration period and said that back-pressure and quick burn-out of the insides were the biggest problems of production-type mufflers.

As might be expected this drew a rebuttal from a representative of the GMC Truck & Coach Division who said that standard mufflers are designed with suitably low back pressure and consequently with no appreciable loss in power. So far as life is concerned it is admitted that standard equipment mufflers do not stand up very long, although mufflers on diesel equipment last longer than with gasoline engines. GMC feels that stainless steel mufflers offer the best solution to long life but have not considered them as being practical since cost may be as much as 30 times that of a standard muffler.

Another point made by GMC is the difficulty of establishing the proper standards for judging noise or acceptable quietness. This is a technical problem—one requiring considerable experimental work to establish standards and the necessary instrumentation. It was mentioned that the SAE has set up a committee to study this problem, the group being headed by Fred B. Lautzenhiser.

In rebuttal, Hoy Stevens of ATA said emphatically that fleet operators are entirely dissatisfied with standard equipment mufflers and would be glad to pay any extra cost for a good durable muffler for heavy duty vehicles.

Diesel Smoke Objectionable

"SMOKE from diesel engines is a real problem," Mr. Rodgers said. "I have seen diesels in narrow valleys in the mountains that would put the worst coal burning locomotives to shame. You just can't pass this off as an operating problem. Some of it lies in the easy adjustment features of the injectors which permit fiddling by drivers who think that smoke means power. The fleet operator with $10,000-plus vehicles, repairs and adjusts such units in a well equipped shop. Injectors should be made more fool-proof so that accurate shop adjustments cannot be tampered with by unauthorized persons."

Cummins Engine Co., submitted a prepared statement dealing with smoking of diesel engines, resting its case on the fact that smoke is due almost entirely to overloading. The logical solution is to install larger engines capable of carrying the maximum loads at the desired speed on long grades.

More Horsepower Wanted

COMPLAINTS about slow performance on grades are not confined to the West Coast and Rocky

(TURN TO PAGE 174, PLEASE)

Kilroy, Modern Style

"Kilroy," a portable service station capable of completely servicing mechanized units operating on heavy construction jobs. Housed in a 21-ft, four-wheel trailer, the new portable mobile service unit is 8 ft. 3 in. high and has a gvw of 18,000 lb, more than 3 1/s tons of which is fuel and lubricant payload. Contained are 700 gal of gasoline and diesel fuel, 200 gal or oils and greases, 60 gal of water or anti-freeze, quantities of kerosene and compressed air. An operating crew of four can simultaneously service two pieces of equipment in 15 min. The unit will be produced by Jax, Inc., Pittsburgh.

Highway Trailer Introduces Illustrated Lecture Series

IN A MOVE to bring the product as well as the factory to the prospective trailer buyer, Highway Trailer Co., of Edgerton, Wis., is making use of 3-dimensional pictures. With a new type, battery operated sterioscope and a series of slides, the client makes a trip through the factory, visits the factory personnel and watches them in the process of turning out Highway products. Correlated with a carefully prepared lecture, the system brings to the customer a visual interpretation of the processes, materials and construction of trailers and trailer assemblies.

If you are approached by a Highway Trailer representative in the near future, it is possible he will invite you on a "trip." He will provide you with a "little black box" which he will call a colorscope. As you lean back in your office chair, he will supply a series of slides to show you just how Highway equipment is made. He will introduce you to life-like figures—key men, as well as laborers, who will show you company equipment, construction processes as well as principal trailer components. New equipment will be shown while the salesmen describes latest engineering developments.

No, the men and equipment won't talk to you or move off the slide, but it will appear possible, so realistic are the illustrations. It is very possible that you will have a pretty clear picture of the company, its products and its services after a short session.

OTC
NEW HEAVY DUTY REVERSIBLE RATCHET
H-363 — 20" long
Handiest, smoothest-operating, sturdiest reversible ratchet yet developed. Reverses with a flip of the fingers on knurled button. Working parts fully enclosed to prevent clogging. Short throw permits work in close quarters, yet long enough for ample leverage.
When you need PULLERS, think of OTC—the COMPLETE Line. Ask your OTC Jobber.
OWATONNA TOOL CO.
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LOOK for this Sign
CT-685 ADJUSTABLE SPANNER WRENCH
577 PLYMOUTH STARTER WRENCH
865 STUD PULLER
403 FORD HUB BOLT WRENCH
TC-56-81 UNIT THREAD CHASER
1133 TIRE IRON SET
OTC Specialists in Special Tools
TO MAKE HARD JOBS EASY
431 FORD KING PIN REMOVER
HC-642 TRUCK PITMAN ARM PULLER
944-A PINION SHAFT PULLER
847 BATTERY TERMINAL PULLER

Scrapbook

of Practical Fleet Practices

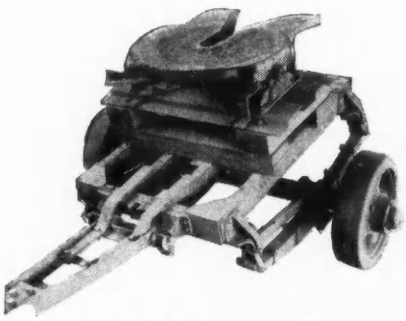
Trailers serviced at dock while loading

Shop dolly gives safe support for semis

Bug screen covers ventilating wing

Hydraulic dolly hoist speeds shuttling

Portable unit eliminates freezer system

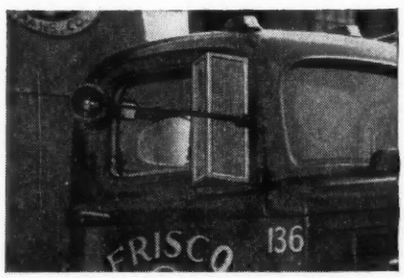


LOW SHOP DOLLY

Trailer repairs often necessitate removal of the landing gear which, in turn, requires jacks. Also it is often necessary to move the trailer from one position to another. To make both jobs safer and easier, Detroit Creamery's Gibson St. garage keeps this converted dolly on hand. Solid rubber tires have been substituted for pneumatics and a rigid tongue was bolted in place. An added bonus—the rig gives the low height required for limited headroom in the paint shop.

TRAILER SERVICE AT THE DOCK

Frisco Transportation Co.'s loading dock at Springfield, Mo. is some distance from the shop. It took a lot of time and manpower to shuttle trailers back and forth. Fleet Supt. J. G. Parrish eliminated all the headaches by piping the dock for air and water, with connections at every other stall, and taking his crews to the docks with portable equipment for lubricating, washing and tire maintenance. While tractors still are serviced at the shop, trailers go to the shop only when major repairs are needed. All normal service is accomplished at the same time the units are loaded and unloaded. Parrish says the system works and that it has the added advantage that trailers are always ready to go when loaded.



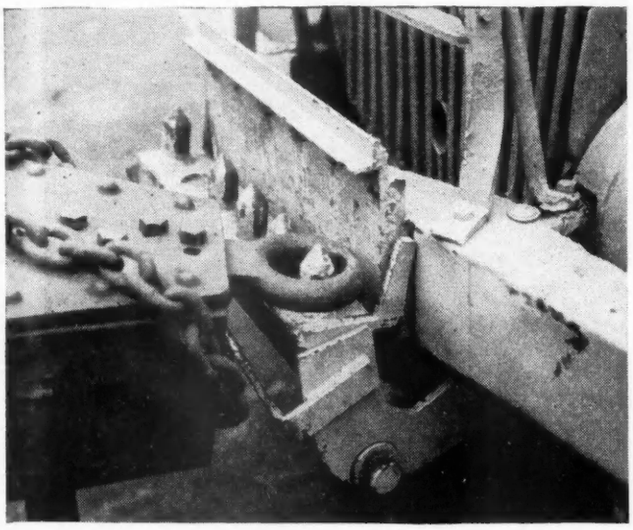
BUG SCREEN

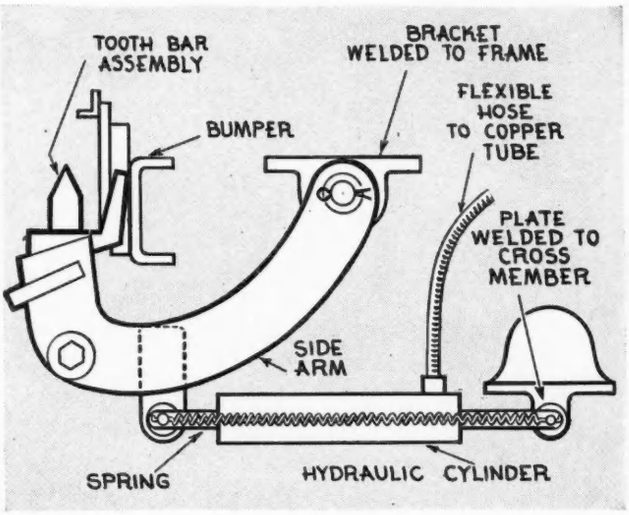
Although most modern truck cabs, including the one illustrated, are equipped with good ventilating systems, they still leave something to be desired when the going gets really hot. The ventilating wing, when swung around to a full scoop position really pulls in the breeze but picks up all the bugs along with it. Frisco Transportation Co. solved the problem by building the triangular bug screen shown. Top, bottom and corner pieces were fabricated from thin-gage tinned metal, while the screen is ordinary copper fly screen.

ANOTHER installment of the CCJ Scrapbook, designed to keep readers abreast of the "little things" that often make big differences in an operation.

Can trailers be serviced economically at the dock? How can you get good ventilation without bugs? What is an easy way to handle wheel dollies?

These are some of the questions you will find answered here as noted by CCJ editors and correspondents working in all parts of the country.





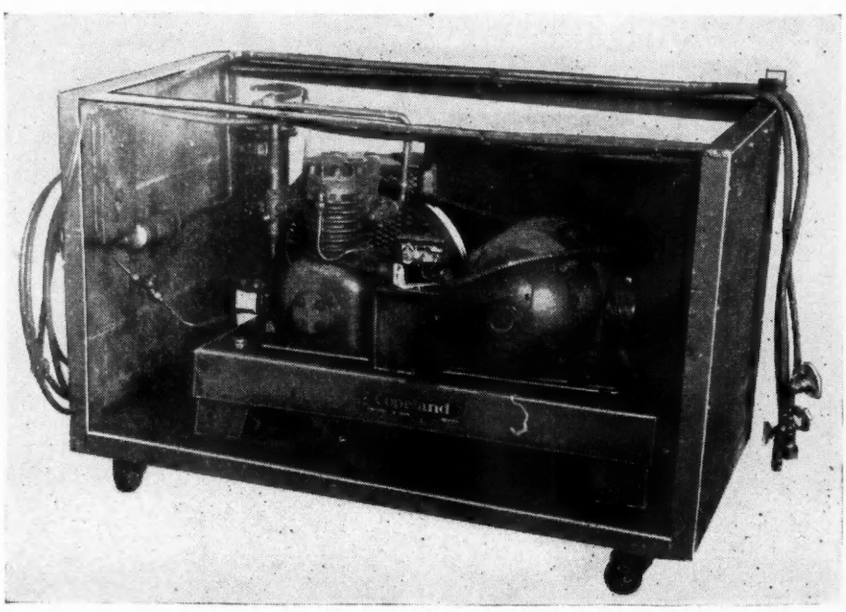
HYDRAULIC DOLLY HOIST SPEEDS YARD MOVEMENTS

On long-distant bulk runs, Detroit Creamery uses a number of tractor, semi-trailer and full trailer trains. The full trailer consists of a semi with four-wheel (single axle) dolly inserted under the front end. Moving these dollies around the yard and shoving them under a loaded trailer is a back-breaking job in any man's language. To solve the problem, tractor driver Olie Huges of the Tillman Ave. garage rigged up the hyraulic hoist shown above. With it he can pick up the dollie, roll it about the yard and, with the whole operation in full view, shove it under the semi—all without leaving the cab.

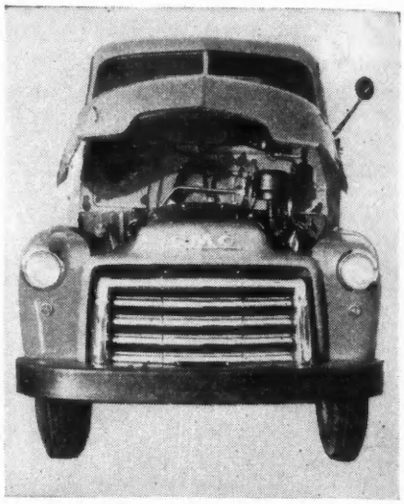
The hoist is made up from heavy angle iron sections and fitted with a row of 2½ x 1½ in. teeth. any one of which engage the "eye" on the dolly draw bar. It is activated by a hydraulic ram swiveled between the hoist bar and an angle iron welded to a cross member. It in turn receives its pressure from a manually-operated hydraulic pump on the tractor floor. In the raised position the teeth meet a heavy steel 1 in. shelf which forms the upper part of the jaw and holds the "eye" securely in place.

PORTABLE FREEZING UNIT

Detroit Creamery has two kinds of truck refrigerating systems both equipped with hold-over plates. One type uses the plug-in, electrically-driven compressor; the other was designed for charging from a central ammonia plant using two flexible refrigerant lines for the connection. The latter proved inefficient, particularly for trucks that were loaded at one point and stored at others. Installation of separate units on the trucks not designed for them presented problems involving cost, space and weight. But all these problems were solved by the use of the "roll-up" unit illustrated. Ammonia lines are plugged into the truck using the same fittings as before and the "roll-up" unit, in turn, is plugged into any convenient electrical outlet. These units have proved faster and much more flexible than the old central system.

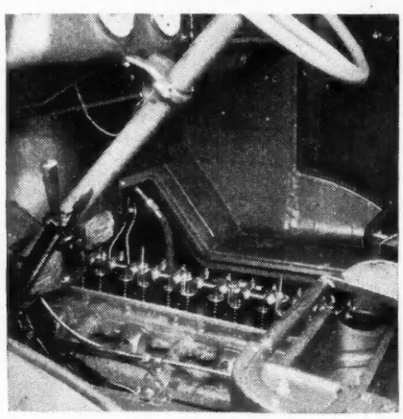


Model FF-350 typifies styling of new GMC coe models. Deluxe cabs with rear-quarter windows are optional



ABOVE *Hood raises for access to front of engine & many accessories*

BELOW *With floor boards & cushions out, engine is unusually accessible*



GMC Presents Three COE'S

11 models with 110 to 197-in. wheelbases have gvw range from 16,000 to 21,500 lb

DIMENSIONS AND REAR AXLE OPTIONS

Model	Wb (in.)	Ca (in.)	Overall (in.)	Rear Axle Type	Ratios		
FFR-351	110	60	186	Hyphoid (standard)	6.17		
FF-351	122	72	202½	Two-speed	5.14-7.15	5.83-8.10	6.33-8.81
FF-352	137	87	221½	Two-speed double reduction	6.13-8.10		
FF-353	161	111	251½				
FF-354	179	129	297½				
FF-355	197	147	319½				
				Spiral bevel (standard)	5.71	6.29	7.40
FF-451	122	72	202½	Two-speed	5.63-7.81	6.50-9.04	
FF-452	137	87	221½	Two-speed double reduction		6.13-8.15	
FF-453	161	111	251½	Heavy-service spiral bevel	6.43	7.16	
FF-454	179	129	275½	Heavy-service two-speed	5.63-7.65	6.43-8.74	
FF-455	197	147	319½	Heavy-service double reduction	7.10	8.50	9.43

MAJOR ENGINE SPECIFICATIONS

	Series FF-350	Series FF-450
Engine Model	GMC 248	GMC 270
Type	Valve-in-head	Valve-in-head
Number Cylinders	6	6
Bore (in.)	$3^{23}/_{32}$	$3^{25}/_{32}$
Stroke (in.)	$3^{13}/_{16}$	4
Displacement (in.)	248.5	269.5
Governor set at rpm	3000	2800
Compression Ratio	6.75 to 1	6.75 to 1
Brake Horsepower:		
Maximum, gross rating	100 at 3000 rpm	104 at 3000 rpm
Net at governed speed	89.5 at 3000 rpm	94 at 2800 rpm
Torque (lb. ft.):		
Maximum, gross rating	202 at 1000 rpm	222 at 1000 rpm
Net maximum	195 at 1000 rpm	216.5 at 1000 rpm

NOW ROLLING off the production lines of the GMC Truck & Coach Div., Pontiac, Mich., are three new GMC c-o-e models in the medium duty range—the FF-350, FF-450, and the FFR-351. These models offer all of the accepted advantages of c-o-e vehicles in addition to all features included in the conventional models introduced last year.

The FF-350 series is composed of five models with wheelbases ranging from 122 to 197 in., a gvw rating of 16,000 lb. and gtw of 26,000 lb. The FF-450 series is offered in the same number of models and wheelbases. GVW ratings for these models are 19,500 lb. with standard rear axle; and 21,500 lb. with optional heavy-duty rear axle; while gross combination weights are 34,000 and 37,000 lb. respectively.

The FFR-351 is a special model in

(TURN TO PAGE 132, PLEASE)

For Perfectly Graduated Control of Trailer Brakes . . .

IT PAYS TO STANDARDIZE ON
Vacuum
Bendix
Power
FOR EVERY POWER BRAKING NEED
TRACTOR CONVERSION FITTINGS KIT
Complete Kit containing all necessary parts and installation instructions for converting a truck power installation into a tractor installation.
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Units and Accessories
This new Bendix Vacuum Power Brake Catalog gives the answer to every power braking problem. Write today for your free copy.
The R. H. Hand Control Valve provides perfectly graduated trailer brake control, independent of tractor brakes.
The B-K Transfer Valve simplifies piping and is used with the Hand Control Valve and is installed on the tractor.

Bendix* Tractor Conversion Kits provide a complete, inexpensive and simple method of converting truck power installations into tractor installations. The B-K Transfer Valve included in the Kit reduces piping and speeds up foot application. Using the R. H. Hand Control Valve gives perfectly graduated "hand and foot" control over trailer brake application. Installation is remarkably easy and inexpensive, as all kits are packaged complete, and include thorough and easily understood instructions. Ask your Bendix distributor for all the facts and figures. You will find it pays you well to standardize on performance-proven B-K kits.

*REG. U. S. PAT. OFF.

Now
It's easy to install power braking on even the lightest trucks. Hydrovac—world's most widely used power braking unit—brings efficient, economical power braking to the light truck field.
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AVIATION CORPORATION

Private Owners

Stress Threats to Operation

Labor Act, truck leasing, sizes and weights, and Department of Transportation also discussed at annual meeting of Council

"THREATS to private truck operation" was again the central theme of the ninth annual meeting of the National Council of Private Motor Truck Owners, Inc., in Washington late in January, but speakers on other topics made statements that are also of current interest to truck operators.

Hal H. Hale, executive secretary of the American Association of State Highway Officials, said that the association's policy on sizes and weights and axle loads would be reviewed in the near future and that the counsel of highway groups again would be sought.

Taft-Hartley Amendment

CONGRESSMAN Fred A. Hartley, Jr., co-author of the Taft-Hartley labor act, said that he intends to introduce an amendment to the act which would make it a Federal offense to interfere with a worker who wants to enter a place of employment. The purpose of this, he said, is to protect the right of a worker to work if he wants to. Mr. Hartley said he realized his proposal would be referred to by union leaders as a strike-breaker. Another proposal he has in mind is to make the Sherman and Clayton anti-trust laws applicable to a labor monopoly just the same as to a business monopoly.

Responsibility on Lessee

W. Y. BLANNING, director of the ICC Bureau of Motor Carriers, said that in the case of "gypsy" truck operators there is need to place the responsibility for abiding by safety regulations on the person who leases out the truck rather than on the person who leases it.

On the subject of the ICC leasing investigation order, Mr. Blanning said that the calling of the hearings is not to be taken as an indication that the Commission favors leasing as it is outlined in the order. The leasing regulations in the order were developed for the purpose of having a hearing. Mr. Blanning said that even he was not in favor of all of the provisions. But they will serve the purpose of developing views and a record on which the Commission can formulate a decision. He explained that the leasing regulations proposed do not apply to the leasing of trucks among private operators; only to common carriers in their dealings with one another and with shippers. It has nothing at all to do with the leasing of trucks from truck leasing companies.

Take Highways Out of Politics

RUSSELL E. SINGER, executive vice-president of the American Automobile Association, struck a popular note when he said that "we should take highway planning and building out of politics and put it on a sound basis of economics and engineering."

L. F. Orr, of the Pet Milk Co., spoke against Senate bill 1812 which would set up a Department of Transportation with a secretary of cabinet rank. "It is an innocent bill on its face," he said, "but it means going the way of England (i.e., nationalization). It will mean getting a permit from some central body to operate trucks." Mr. Orr's motion that the Council oppose S. 1812 was passed on the general grounds that there was no need for setting up another bureau.

W. H. Ott, Jr., of Kraft Foods Co., speculated on the comparative inactivity of the Transportation Association of America. He wondered if its efforts to get the support of business for its transportation integration plan had bogged down (and without this support integration is a lost cause), or whether it was biding its time pending the attempt to have a Federal Department of Transportation set up with a Secretary of Transportation. It might be, he ventured, that the TAA feels concentration of its effort on such an individual might bear greater fruit than its past efforts. He admitted that his thinking was purely speculative.

Threat to Private Carriers

AN article detailing the current threats to private motor truck operation and a clear statement of the Council's attitude toward them was published in the February, 1947, issue of COMMERCIAL CAR JOURNAL, page 61. The threats still prevail and the attitude of the Council remains unchanged pending decisions by the ICC in four cases which are before it. To emphasize the seriousness of the threat the Council at this annual meeting arranged a panel discussion on "Transportation and Free Enterprise."

Prof. John S. Worley, transportation engineer, University of Michigan, keynoted the discussion when he said that "the attempt on the part of for-hire transportation companies to secure special advantage is not in keeping with the fundamentals of our democracy and the free enterprise system and is not in the public interest." He warned that "if interests that are seeking benefits to which they are not entitled succeed, a prac-

(TURN TO PAGE 140, PLEASE)

THE SENSATION OF THE PISTON RING WORLD!

THE NEW MD-50 STEEL OIL RING—

the only ring with the Full-Flow Spring—

is the ring of the year!

Make old engines behave like new engines! Even in tapered and out-of-round bores this amazing new Sealed Power MD-50 Steel Oil Ring works efficiently. Ends oil waste! Increases power! Get Sealed Power "X" Ring Sets featuring the MD-50, the only ring with the Full-Flow Spring!

1. **Full-Flow Spring insures improved oil economy over a longer period.**
2. **Double ventilation in the Full-Flow Spring gives more spring action to steel segments—important in tapered and out-of-round bores.**
3. **Full-Flow Spring leaves all spacer slots and piston oil holes free and open.**
4. **Exclusive Full-Flow Spring design compensates for varying groove depth without loss of tension.**
5. **Full-Flow Spring provides greater bearing area on both piston and ring, assures longer ring life.**
6. **Full-Flow Spring retains original efficiency for entire life of ring.**

Only the new Sealed Power Full-Flow Spring gives you all these advantages. Available in Sealed Power "X" Sets featuring the MD-50 Steel Oil Ring—THE ONLY RING WITH THE FULL-FLOW SPRING! Sealed Power Corporation, Muskegon, Michigan. In Canada: Stratford, Ontario.

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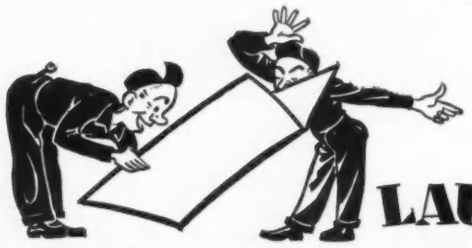
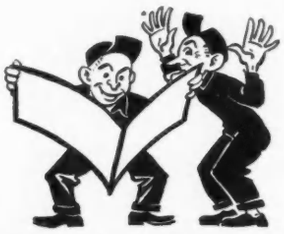
Sealed Power

PISTON RINGS

BEST IN NEW TRUCKS! **BEST IN OLD TRUCKS!**



LAUGH IT OFF



One of our trucking friends, who is a great naturalist by hobby, was recently approached by two small boys of his neighborhood. The youngsters had caught a butterfly, a centipede, a beetle and a grasshopper. Taking the centipede's body the butterfly's wings, the beetle's head and the grasshopper's legs, they had glued them together to make an alarming insect. "We caught this bug in the field," they said innocently. "What kind of a bug it it, sir?"

Our trucking friend examined it with great solemnity. "Did you notice whether it hummed when you caught it, boys?" he asked gravely.

"Yes, sir," they answered, concealing their mirth.

"Just as I thought," said our friend, "It's a humbug."

C C J

Retired Fleet Operator: "Is this a healthful town?"

Western Ranger: "Sure is. When I came here I couldn't say a word; didn't have a hair on my head; didn't have strength to walk across the floor. Why, I had to be lifted from my bed."

R. F. O.: "That's remarkable. How long have you been here?"

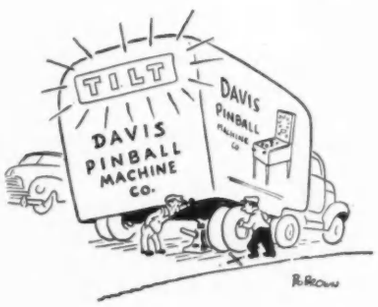
Western Ranger: "Oh, I was born here, stranger."

C C J

The new secretary to the Traffic Manager was recounting to the rate clerk her experiences with past employers.

"Good gracious," the rate clerk said after hearing of five different changes in eighteen months, "you have had a lot of bosses!"

"Yes," replied the young secretary, "but I think I'm on the last lap now."



"Miss Helen," said the parson impressively, as he led her into the brook for baptism, "I'se g'wine lead you out inter dish heah stream, an' wash out every spot o' sin you's got."

"Lawsy, Pahson," giggled the erstwhile frolicsome damsel, "in that li'l ole shallow creek?"

C C J

SAFETY SADIE: "MY BOY FRIEND DOESN'T DRINK, SMOKE OR SWEAR."

CATTY CORA: (SWEETLY) "DOES HE MAKE ALL HIS OWN DRESSES?."

C C J

A little old lady riding in a trolley car was anxious not to pass her destination. She poked the operator with her umbrella.

"Is that the First National Bank?" asked the lady.

"No, ma'am," replied the operator, "that's my stomach."

C C J

The Tennessee mountaineer up and got married. He built his new bride a cabin, and when it was completed, he fetched her to come and give it a looksee.

"Wal," said the hill william, surveying his labors with pride, "how d'ya like yer new home, woman?"

"Not bad, husband," she said, "but I don't see no door."

He looked at her in amazement. "Door?" he demanded. "Yew plannin' on a 'goin' somewheres?"

C C J

A mother sat knitting one evening as her daughter was reading a book that gave the meaning of names. As the mother knitted she thought of all the young men who called on her daughter. "Mother," her daughter remarked, "it says that Philip means 'Lover of Horses,' and James means 'Beloved.' I wonder what George means?"

"I hope, dear," replied her mother, "in view of the alarming way that you and George have been carrying on—that George means business."

C C J

HUSBAND: "WHAT POSSESSED YOU TO CHOOSE LEMON COLOR FOR YOUR NEW GOWN?"

WIFEY: "IT WAS BECAUSE I HAD SUCH A JOB SQUEEZING IT OUT OF YOU."

Mechanic: "Darling, I could sit here and do nothing but look at you forever."

Girl Friend (ready for rompin'): "Yeah, that's what I'm beginning to think, too!"

C C J

THE BATCHELOR'S A CAGEY GUY,
AND HAS A LOT OF FUN;
HE SIZES ALL THE CUTIES UP
AND NEVER MRS. ONE.

C C J

The Safety Engineer drew up his chair beside his wife's sewing machine.

"Don't you think you're running too fast?" he asked. "Look out! You'll sew the wrong seams. Slow down, watch your finger! Steady!"

"What's the matter with you, John?" said his wife in alarm, "I've been running this machine for years."

"Well, dear, I thought you might like me to help you, since you insist on helping me drive the car."

C C J

MAINTENANCE SUPT.: "I JUST HEARD THOSE TWO NURSES SAYING SOME MEAN THINGS TO YOU."

SHOP FOREMAN: "YEAH, THEY'VE HAD ME ON THE PAN EVER SINCE I'VE BEEN HERE."

C C J

The wife of the president of Fleety-Fleet Express was in the act of instructing the new maid in her duties:

"Sometimes," said the mistress, "it will be necessary for you to help the butler upstairs."

"I understand, madam," replied the girl, "I drink a bit myself, sometimes."

Resume work

EXIDE BATTERIES... assure dependable service at low cost per mile of operation

When your trucks are Exide Battery equipped, you profit in many ways. You can be certain of dependable performance, long life, economy and ease of maintenance. A natural result, for back of the fine performance and economy records of Exide Batteries are 60 years of engineering and battery building experience.

Whatever type of trucks you operate . . . half-ton pickups or big trailer-pulling tractors . . . there is a dependable, long-lasting, economical Exide Battery that will exactly fit your needs.

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Double insulation between plates
"Bull's Eye" electrolyte leveling device
Heavier inter-cell connectors
Hard rubber container
Positive cover seals

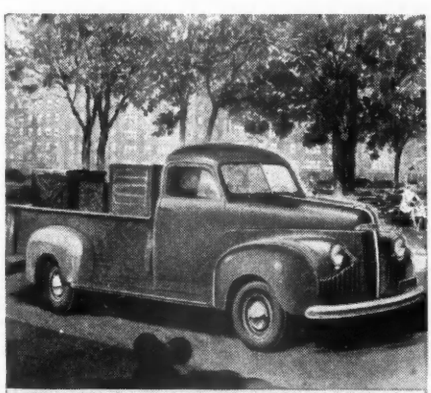
THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia 32
Exide Batteries of Canada, Limited, Toronto

1947 New Truck Registrations by Makes by States*

STATE		Auto-car	Brock-way	Chev-rolet	Dia-mond T	Divco	Dodge	Fed-eral	Ford	FWD	GMC	Inter-na-tional	Mack	Osh-kosh	Reo	Ster-ling	Stude-baker	Ward La France	White	Willys	All Others	Total
Alabama	Dec.	3		563	6	1	78	5	70		102	138	9		24		55		7	108	4	1,173
	12 Mos.	7		5492	99	29	2382	81	3953	1	1054	2163	100		288		548	1	176	1168	73	17,615
Arizona	Dec.			200	2	4	43	2	56	1	49	51	1		10	1	33		1	44		503
	12 Mos.	4		1340	27	16	617	20	1107	5	328	457	13		104	5	326		48	355	39	4,811
Arkansas	Dec.			455	2		94		40		41	43	3		5		24			65	2	774
	12 Mos.			4880	85		1724	40	3816		804	1466	30		104		507		59	1020	28	14,563
California	Dec.	29	6	2267	49	41	695	12	527	7	660	672	40		33	10	414		57	237	98	5,854
	12 Mos.	369	52	15806	495	351	8816	174	12293	186	4577	6694	384		530	117	3869	9	622	2321	988	58,653
Colorado	Dec.			239	6	3	73	4	28	2	42	104	2		9		25		7	38	2	584
	12 Mos.	27		2351	119	55	1149	46	2252	76	547	1445	49	2	115		389	9	80	714	65	9,490
Connecticut	Dec.	15	8	187	20	10	90	20	37	7	45	66	14		8	1	37		6	32	9	612
	12 Mos.	197	140	1982	141	100	1176	183	1323	43	502	1316	276		128	7	480		158	422	91	8,665
Delaware	Dec.	1		73			17		23		10	26			2		4		3	3		162
	12 Mos.	17	21	674	20	24	482	1	636	4	164	386	17		26		114	2	31	97	17	2,733
Dist. of Col.	Dec.	3	1	111	5	5	24	4	14		30	37	5		4		9	2	3	18	2	277
	12 Mos.	18	20	783	47	105	498	35	718		301	405	34		55	2	138	2	50	68	19	3,299
Florida	Dec.	1		635	22		174	4	235		99	143	20		15		78	1	15	154	14	1,610
	12 Mos.	38	1	5710	196	34	2425	75	4340	35	913	1889	244		229		849	5	179	1033	188	18,383
Georgia	Dec.			763	7		61	4	51		22	80	7		6		30		10	39	2	1,062
	12 Mos.	7	2	6619	192	11	2802	67	5231	1	960	2157	169		245	1	741		230	993	71	20,499
Idaho	Dec.			225	8		93	6	55	3	39	77	4		8		50		2	39	3	612
	12 Mos.	9		1639	73	17	742	61	1296	17	349	838	21	1	81	2	423		22	457	62	6,110
Illinois	Dec.	3	1	882	59	32	300	17	245	1	162	439	27		37	2	106		29	132	20	2,494
	12 Mos.	239	55	12023	1097	398	6325	278	9445	19	2394	6720	407		782	19	2054	6	685	2120	391	45,457
Indiana	Dec.	1	2	656	16	4	134	6	72	19	68	233	10		23		123		42	103	12	1,524
	12 Mos.	39	121	6303	385	151	3645	150	4985	56	1401	4081	162		437	1	1780		471	1339	248	25,755
Iowa	Dec.			919	27	10	195	9	167	3	99	433	16	2	43		92	1	32	240	15	2,303
	12 Mos.	5	2	5658	315	69	2563	70	4237	21	864	3570	173	2	327		1052	3	174	1638	92	20,835
Kansas	Dec.		1	487	9		106	10	38	1	50	175	1		23		71		11	56	3	1,042
	12 Mos.	10	2	5507	248	24	1823	165	3869	2	829	2397	49		220		939		164	638	71	16,957
Kentucky	Dec.	3		599	18	4	102	10	60		73	141	4		34		71		11	154	5	1,289
	12 Mos.	19		5030	189	23	2224	137	3503	1	898	2155	100		270		682		142	1716	104	17,193
Louisiana	Dec.			458	2		19	1	15		6	24	3		2		9		5	2	3	549
	12 Mos.	15		3755	186	19	1656	47	2980	2	566	1566	115		148		630		163	778	29	12,653
Maine	Dec.			119	5		52	1	59		12	62	3		6		12		1	37	2	371
	12 Mos.	24	32	1852	24	26	1057	73	1891	7	426	1065	116	12	140	13	373	5	81	410	56	7,683
Maryland	Dec.	5	9	398	3	13	130	66	51		54	117	13		8	1	36		9	39	3	955
	12 Mos.	100	108	3436	79	151	2015	182	2439		641	1537	183		240	1	565	22	154	484	75	12,412
Massachusetts	Dec.	14	3	238	10	19	128	12	66		57	94	13		8	2	37		6	43	9	759
	12 Mos.	276	242	3726	256	344	2777	112	3831	5	1068	2326	421	2	270	122	821	32	354	559	151	17,695
Michigan	Dec.	4	7	1269	22	40	347	44	267	1	294	360	24		74		197		42	276	11	3,279
	12 Mos.	79	63	8462	354	425	5617	528	7636	4	1963	3199	169		845	1	1523	17	345	2031	292	33,553
Minnesota	Dec	2		247	5	5	89	5	66		55	129	1		4		40		7	65	11	731
	12 Mos.	55	2	4118	197	80	2431	206	4153	32	826	2638	132	7	146		895	17	303	764	105	17,108
Mississippi	Dec.			719	7		118	3	100		65	114	6		13		49		6	98		1,298
	12 Mos.	2		5225	117	2	1881	36	3740	1	843	1532	101		133		565		105	956	25	15,264
Missouri	Dec.	2	2	1290	16	8	263	10	184		184	265	14		23		97		23	126	9	2,516
	12 Mos.	24	11	8639	304	108	3502	136	6197	3	1543	3612	142		249		1114	4	318	1595	130	27,631
Montana	Dec.			359	5		46	4	46		24	80	3		3		49		6	73	1	699
	12 Mos.	5		2266	85	3	1077	44	1522	20	366	1105	12	1	85	2	469		67	1063	44	8,243
Nebraska	Dec.			326	19	2	85	5	43		38	161	7		10		49		15	91	1	852
	12 Mos.	6	1	2964	247	19	1508	78	2401	28	579	2087	152	3	145		654		226	949	35	12,082
Nevada	Dec.			17			9		9		4	4					8		1	4		56
	12 Mos.	8		302	21	3	230	2	304	7	88	193	3	1	15	2	83		11	75	25	1,373
New Hampshire	Dec.	5	1	88	2	5	56	3	21	1	20	44	8		6	1	15		5	19	1	301
	12 Mos.	27	11	894	30	23	608	20	739	1	188	497	133		83	17	161		57	223	37	3,749
New Jersey	Dec.	31	80	932	36	35	328	21	105	1	172	229	57	1	17	1	115	4	59	108	30	2,362
	12 Mos.	343	575	5571	324	367	3102	205	3906	14	1564	2874	766	3	252	18	989	44	459	985	243	22,604
New Mexico	Dec.			191	2		55	2	43		28	39	1		3		14		3	13	1	385
	12 Mos.			1608	68		733	33	959	5	354	565	39		44		235	2	63	229	15	4,952
New York	Dec.	60	91	97	69	48	594	33	366	10	272	434	160	11	98	6	129	13	69	180	56	3,616
	12 Mos.	969	1513	11396	1044	535	9587	499	9881	141	3531	6983	2210	67	1124	77	2270	182	1344	2308	598	56,259
North Carolina	Dec.	10	1	1414	11	3	454	7	147	1	82	226	54		34		121	2	29	171	6	2,773
	12 Mos.	49	16	8384	139	37	3382	165	5354	12	718	2136	400		420		1143	6	334	1620	130	24,445
North Dakota	Dec.			184	5		31	6	54	1	24	147	1	1	4		37		4	78	2	579
	12 Mos.	4		1284	81	7	766	42	1509	11	275	1134	38	4	44		417		29	493	13	6,151
Ohio	Dec.	20	5	1249	28	20	329	23	131		184	443	51		57		145		97	193	15	2,990
	12 Mos.	312	72	11132	464	386	6898	417	8847	29	2583	6024	699	1	820	1	1983	19	1292	2954	403	45,336
Oklahoma	Dec.			920	3	2	252	5	151	4	91	278	6		21		75	1	22	166	3	2,001
	12 Mos.	3		5299	71	41	2675	59	4091	11	860	2842	91		209		798	5	195	1091	51	18,392
Oregon	Dec.	7		286	8	3	113	4	46	4	98	144	10		11	1	53		9	67	9	873
	12 Mos.	51	1	3098	226	43	1892	134	2161	31	799	1475	117		148	14	771		165	896	162	12,184
Pennsylvania	Dec.	58	99	1595	57	16	779	57	259	2	390	610	116	5	78	2	293	5	152	355	37	4,965
	12 Mos.	614	982	11443	737	168	8815	435	9573	46	3091	7399	1170	93	948	78	2681	69	1304	2543	397	52,586
Rhode Island	Dec.	6		87	4	5	39	1	18		23	34	3		1	2	15		2	6	1	247
	12 Mos.	107	7	941	48	93	499	11	662	2	222	438	48		35	10	162	3	63	113	31	3,495
South Carolina	Dec.	1		443	6		97	4	74		38	47	7		10		42		18	50	10	847
	12 Mos.	7		3564	53		1662	36	2774	26	474	859	138		213		455		144	695	94	11,194
South Dakota	Dec.			132	7		65	1	46		23	140	2		13		37		8	68	0	542
	12 Mos.	10		1008	113	3	876	44	1066	10	268	1018	33		94		288		48	656	14	5,549
Tennessee	Dec.			651	5		67	4	27		70	109	4		10		63		9	69	6	1,094
	12 Mos.	12	17	7404	144	28	3189	211	4704	24	1552	2830	211		306	3	899	2	290	1226	154	23,206
Texas	Dec.	5		2003	42	3	698	14	339	2	305	600	34		65		218	1	88	262	10	4,689
	12 Mos.	6	20	16005	375	123	8273	170	12454	8	2849	7112	390	1	628		2428	7	845	3284	204	55,182
Utah	Dec.			157	7	2	52	1	35		22	24	2				18		1	22	8	351
	12 Mos.			1233	52	29	570	51	1022	16	307	653	33	1	19	1	278		44	252	51	4,612
Vermont	Dec.		3	76		1	34		10	1	21	29	6		4		21			30	2	238
	12 Mos.	9	35	799	29	12	569	28	811	7	233	523	86	6	122	7	158	13	33	430	36	3,946
Virginia	Dec.	1	2	713	18	4	205	14	138		75	193	8		40		81	1	28	109	15	1,643
	12 Mos.	102	64	6457	209	96	3086	161	5940	15	983	2401	148		311	1	915	2	297	1178	189	22,555
Washington	Dec.	1		360	14	9	104	7	102		102	140	7		10		51		13	38	21	979
	12 Mos.	24	1	3353	206	87	1914	30	3278	18	869	1816	147		199	16	857		114	657	194	13,780
West Virginia	Dec.	4	3	203	3	8	78	6	25		40	48	12		12		35	2	9	62	5	555
	12 Mos.	33	66	2094	81	43	1478	108	1918	65	506	970	99		149		413	12	110	801	73	9,019
Wisconsin	Dec.	3		485	24	6	209	6	107	7	66	213	9	3	27	1	71	2	20	82	3	1,346
	12 Mos.	51		5433	319	181	2581	124	3945	123	1040	3092	130	38	367	38	824	4	385	938	116	19,729
Wyoming	Dec.			156	5		46		19		15	62			3		14		2	31	1	354
	12 Mos.	1		861	64	4	437	10	722	4	127	511	17		21		153	5	53	484	18	3,492
Total	December 1947	298	325	27933	706	371	8255	483	4887	79	4547	8501	808	23	959	31	3468	35	1002	4495	484	67,690
Total	December 1946	672	325	22812	654	312	8943	475	14294	51	4346	6955	244		1261	33	2984		1151	3405	536	69,453
Total	12 Months 1947	4334	4255	235803	10475	4893	126738	6020	186414	1195	49187	113151	10917	245	12911	576	41861	509	13086	49819	6745	879,132
Total	12 Months 1946	4755	3683	171618	5093	3734	96490	4557	131469	585	25645	78392	4687		10489	510	25360		10117	42135	5930	625,249

* Data from R. L. Polk & Co.

Studebaker trucks score on every count for firms that keep exact records!



Sturdy Hy-Mileage and Econ-o-miser power plants! There's pulling power to spare in Studebaker's two great truck engines. Automatic spark control, adjustable octane selector, oil-bath air cleaner increase performance and economy, cost you nothing extra. Seven stand-out aids to drivers' comfort and convenience distinguish Studebaker truck cabs.

TOP favorite truck today with many operators of fleets of trucks is Studebaker.

They like Studebaker's stand-up stamina and gas-saving engineering—as indeed they should.

A nice profit picture invariably shows on their books.

"8000 miles with no repairs!"

One Maryland fleet operator says his Studebaker trucks are paying their way so well, he is getting several more as soon as possible.

One of his Studebaker pick-ups has gone 8000 miles without any repair expense, averaging an impressive mileage per gallon.

Another operator now has nine cost-cutting new Studebakers in service—and wants still more.

He says: "My requirements give the vehicles plenty of punishment. But those Studebaker trucks take the hard hauling in stride with surprisingly little need for repairs!"

Nearly 100 years of economizing!

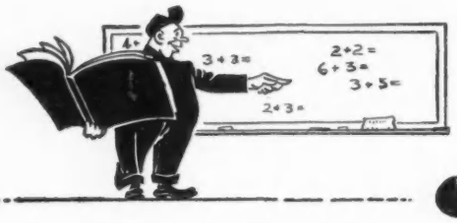
There's good reason for today's big demand for Studebaker half-ton, one-ton and larger capacity trucks. It's based on more than brilliant, modern engineering and painstaking craftsmanship.

Studebaker vehicles have been part of America's life and traditions since the early 1850s. Studebaker's reputation for reliable, economical hauling has grown in stature, year after year, for nearly a century.

STUDEBAKER

BUILDER OF TRUCKS YOU CAN TRUST

©The Studebaker Corp'n, South Bend 27, Indiana, U.S.A.



CCJ QUIZ

Jam on the brakes! Here's another CCJ Quiz. For each question that "stops" you, take 10 points from your score. The answers—you'll find them on page 85.

1.

The quickest way to bring a truck to a stop from high speed is to . . .

a. apply both the hand brake and the service brakes at the same time
b. step on the clutch pedal first and then on the brake
c. "fan" the brakes by alternately stepping on the brake and releasing it
d. push the brake pedal to the floor as hard and fast as you can

2.

The I. C. C. says that trucks under its jurisdiction with brakes on all wheels must be able to stop from 20 miles per hour within . . .

a. 15 feet
b. 30 feet
c. 50 feet
d. twice the length of the vehicle

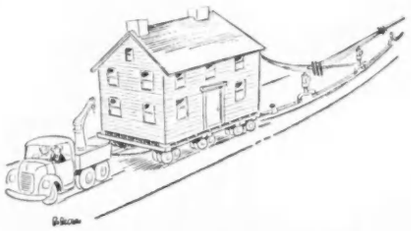
3.

Add 10 points to your score if you know that most hydraulic brake fluids are a mixture of denatured alcohol and . . .

a. water
b. mineral oil
c. kerosene
d. castor oil

4.

In the old days, it took one "giddap" to go and one "whoa" to stop. With trucks today, how does the brake horsepower compare with the pulling horsepower developed by the engine?



"Pulls Kind'a Hard, Doesn't It?

a. Brake horsepower is one-fourth as much
b. Brake horsepower is equal
c. Brake horsepower is twice as much
d. Brake horsepower is six times as much

5.

When roads are slippery, you'll find that this will make stopping a lot easier and safer . . .

a. Anticipate your stops and slow down at quite a distance from the stopping point
b. Drive with the hand brake partially engaged
c. Disengage the clutch before applying the brakes
d. Keep the vehicle in high gear when applying the brakes

6.

Brake accidents are costly. The average property damage from accidents involving trucks with trailers with defective brakes is . . .

a. $50
b. $100
c. $300
d. over $1,000

7.

Get out your stop watch and tell us which of these is the longest time . . .

a. Reaction time
b. Braking time
c. Stopping time

8.

A quick way of figuring how many feet your truck will cover before you can apply the brake in case of emergency is to . . .

a. multiply your "miles per hour" by 1½
b. take "miles per hour" and add ten
c. look at your speedometer. Take 10 per cent of the speed and multiply that number by itself

9.

The current consumed by electric power brakes is about as much as required by . . .

a. the starter
b. the headlamps
c. the tail-light
d. an electric toaster

10.

A clearance of .010 in. is often specified between the brake shoe and the brake drum. This is the thickness of how many sheets of paper (such as is used in the COMMERCIAL CAR JOURNAL)? . . .

a. ½ sheet
b. 1 sheet
c. 3½ sheets
d. 10 sheets

JOBSERVATIONS

By Buster Rothman

Hitting the ceiling is no way to get up in the world.

★ ★ ★

Diamonds are chunks of ordinary coal which stuck to their jobs.

★ ★ ★

A chip on the shoulder is a sure indication of some wood higher up.

★ ★ ★

The bigger a man's head gets the easier it is to fill his shoes.

★ ★ ★

If you don't stand for something, you will fall for anything.

★ ★ ★

The explanation of triumph is all in the first syllable.

DRIVE SLOWGANS

By Buster Rothman

Give the pedestrian a break by using yours.

★ ★ ★

Patience! It is better to kill time than people.

★ ★ ★

Wait for the light—instead of the ambulance.

★ ★ ★

"You know darned well what I meant, Henessey, when I said 'Toss me out the jack!'"

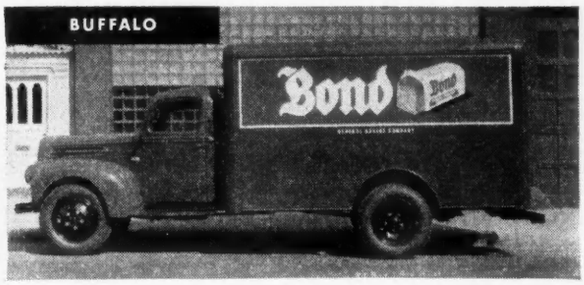
"You can see for yourself, lady, we're doing the best we can!"

"Pulls kinda hard, doesn't it?"

"What a day! And not a solitary soul asked for a raise so I could let off steam!"

WICHITA

BUFFALO



For 7 Good Reasons

GENERAL BAKING COMPANY
BAKERS OF

Bond Bread
Uses Lindsay Bodies

1 EASE OF REPAIR
A Lindsay Body can be repaired quickly—damaged panels easily removed—replacements available from warehouse stocks.

2 NATIONWIDE SERVICE
There are 207 authorized Lindsay Body Builders, thus, you can get complete factory service on any Lindsay Body any place in the country. Your branch offices can also buy new bodies locally and know that they conform to your standard specifications.

3 SPEED OF DELIVERY
Lindsay Bodies—one or a hundred—are built in record time. This modern method of assembly is ideal for line production.

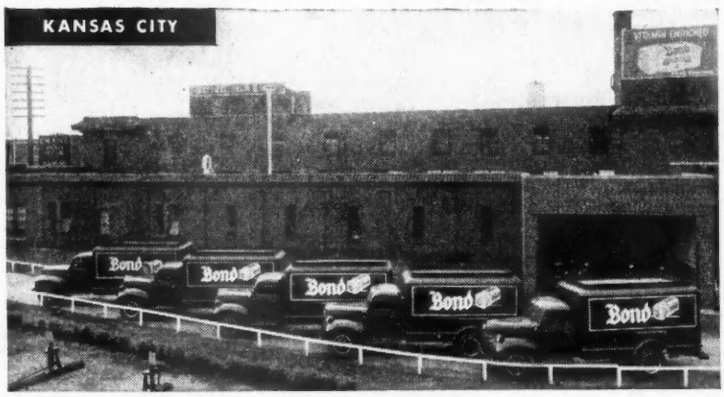
4 STRENGTH AND SAFETY
LS has an amazingly high strength-weight ratio. Your Lindsay Body withstands wear—saves weight, increases payload.

5 APPEARANCE
The rugged beauty of LS is adaptable to your individual design requirements.

6 UNIFORMITY
Units in your fleet can be identical yet built in entirely different parts of the country.

7 EXPERIENCE
Lindsay Bodies stand the test of actual service. The strongest and most frequently heard reason given for the purchase of Lindsay Bodies last year was—"We've used them before."

KANSAS CITY



ENID

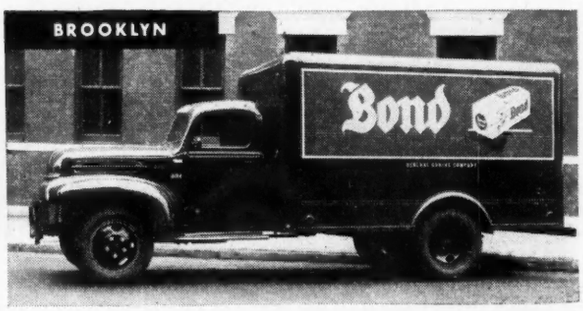
WICHITA

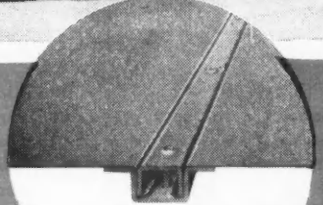
Experience on a nationwide scale proves the many advantages of this modern idea of Truck Body service—made possible by the use of Lindsay Structure.

J. A. Leitner, southwest transportation supervisor of General Baking, says, "Our first LS Body was delivered in August, 1944. We have had very satisfactory service from all our LS units and use this body as standard equipment wherever possible."

It will pay you to get complete information. Write **The Lindsay Corporation, 1724 25th Ave., Melrose Park, Ill. Sales Offices: Chicago, New York, San Francisco.**

BROOKLYN





LINDSAY STRUCTURE
utilizes all the strength
in light sheet metal.

LINDSAY STRUCTURE

LS

U. S. Patents 2017629, 2263510, 2263511
U. S. and Foreign Patents and Patents Pending

WASHINGTON RUNAROUND

Railroad All-Motor Freight Out . . . Post Office Trucks Uneconomic . . . Average Octane Higher
Government Backs Synthetic Fuel Program . . . Truck Traffic Up 15% . . . Rubber Quota Adequate

R.R. All-Motor Freight Out

Three decisions of the Interstate Commerce Commission released last month indicated the determination of the Commission to drive the railroads out of the all-motor freight business, but to permit railroads to operate coordinated rail-motor service.

Texas & Pacific and Rock Island trucking subsidiaries were ordered to discontinue all-motor service. The latter case was decided on the basis of a complaint by a common carrier and supported by the American Trucking Associations. In the third case, the Central of Georgia was authorized to establish truck routes which will be coordinated with its rail service and remain auxiliary to the same.

Review PO Truck Operation

The truck operations of the Post Office Department are now under study by the House Post Office and Civil Service Committee. Rep. Harold C. Hagen, R., Minn., is chairman of a subcommittee handling the problem. The Committee is particularly disturbed over the uneconomic and unscientific replacement procedures employed by Post Office officials. It is also well known that the Post Office Department is the most inefficient operator of government trucks, due largely to failure to replace vehicles properly. Procurement of new vehicles, needed for years, has also been handled in a very unscientific manner. The Committee in a recent report flatly stated that the Department "does not make maximum use of technical design advancement of the automotive industry when specifications are made for new motor trucks." Thus far, the House Committee has arranged one conference between Post Office officials and the American Trucking Associations, in an effort to arrive at a business-like solution.

Most Post Office trucks have been run at least 200,000 miles. Practically the entire fleet was replaced during the fiscal years 1928 to 1932, inclusive. No further truck purchases were made until 1936. Between 1936 and 1941, 2,181 vehicles were purchased. Since 1941, only about 1200 trucks have been added to the fleet. At the present time, the Post Office fleet comprises 10,218 trucks. Some of these are more than 25 years old. The Department would like to replace all those purchased prior to 1933, which would cost an estimated $15,000,000. However, during the next fiscal year it is not expected that more than 2000 vehicles will be purchased at an average unit cost of $2,200.

by GENE HARDY

CCJ Washington News Bureau

Octane Ratings Higher

The average octane ratings of premium and regular-price gasolines sold at filling stations during the summer of 1947 were higher than for the two summers preceding, according to the semi-annual survey of motor fuels conducted by the Bureau of Mines.

Based on the analyses of filling station samples collected in 17 marketing areas of the country, the octane rating of premium-price gasoline sold last summer averaged 79.2, compared with 78.3 the preceding summer, and 74.9 two years before. The average octane rating of regular-price gasoline last summer was 75.1, compared with 74.4 in the summer of 1946, and 69.7 in the summer of 1945.

Although octane ratings were higher last summer, little change was noted in the gasoline volatility and the distillation characteristics compared with the summer of 1946, according to the Bureau report.

Truck-Trailer Output Up

Truck trailer production in December of last year totaled 3285 units, according to the latest report of the Census Bureau. This output was up slightly from the November total of 3266 units and raised output for the year to a total of 53,137.

The 1947 output was down considerably from the 1946 peacetime record of 76,234, but is considerably above pre-war output which totaled 27,118 in 1940.

Shipments during 1947 totaled 55,779 as compared with 73,001 during 1946. For the current year, the Truck-Trailer Manufacturers Assn. says the industry hopes to hit 60,000 units.

Govt. Backs Synthetic Program

The proposed $9,000,000,000 synthetic fuel industry, strongly backed by Interior Secretary Krug and Defense Secretary Forrestal, has evidently been slightly misunderstood by many observers outside Washington.

This huge program, which would result in the production of 2,000,000 barrels of synthetic petroleum products daily, is merely a goal which the Administration hopes the petroleum industry will try to meet in order to supplement declining petroleum reserves. It is not contemplated that the Government will undertake the construction of such an industry, except in the case of a national emergency, at which time it is claimed that it would be too late to get the project under way.

The Government's part in the program, other than provision of technical and economic "know-how" by the Bureau of Mines, will probably be limited to aid, in the form of subsidies, in order to assure the immediate construction of three commercial plants with a total daily capacity of about 30,000 barrels.

The over-all goal of 2,000,000 barrels daily would require about 16,500,000 tons of steel and, according to Krug, should be built over a period of 5 to 10 years depending on the military need for haste.

Interior is not concerning itself with natural gas in this program, since it is felt that the petroleum industry is already making rapid strides in converting this material.

Under the over-all program, the Bureau of Mines would like to see the industry achieve a daily capacity of about 1,000,000 barrels from coal and an additional 1,000,000 barrels from oil shale.

As to raw material requirements, it is estimated that a program of this magnitude would require 200,000,000 tons of coal a year and 600,000,000 tons of oil shale on an annual basis. Oil shale reserves are enormous and practically untouched. Nor does coal present a problem, since any type of coal can be used.

While there is some skepticism in the oil industry on the need for an industry of this magnitude, the Administration feels that it is vital for a variety of reasons. First on the list, is the fact that domesic and foreign requirements are increasing steadily. By the early 1950's, Bureau of Mines experts say that domestic consumption will be about 7,000,000 barrels a day, between 5,100,000, and 5,300,000 barrels as compared with present consumption of

(TURN TO PAGE 82, PLEASE)

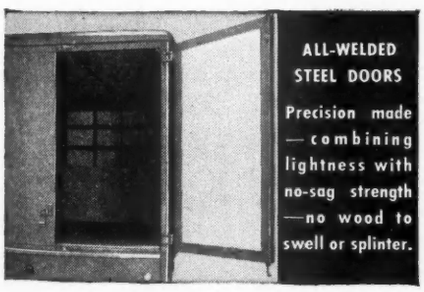
74 FACTORY BRANCHES DISTRIBUTE AND ASSEMBLE

FRUEHAUF ALL-STEEL TRUCK BODIES!

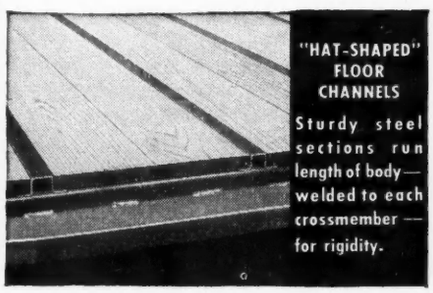
OVER 500 COMBINATIONS—You'll find it easy to select the body best suited to your needs, with 4 basic models and hundreds of combinations to choose from, in the Fruehauf line. These are of durable, all-steel light-weight Aerovan-type construction, including doors. Each section is precision built to exacting tolerances for ease of assembly and replacement. Sections are prime coated, ready for finish paint when the 10 simple assembly operations are completed.

SHIPPED KNOCKED DOWN—Bodies are shipped this economical way to keep costs at a minimum. You can assemble your truck body, or the work can be handled for you at any one of the 74 Fruehauf Factory Branches which stock these models.

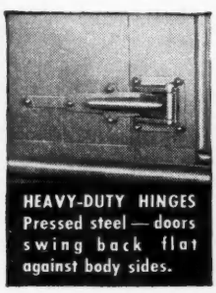
CUSTOM-BUILT QUALITY AT PRODUCTION-LINE PRICES!



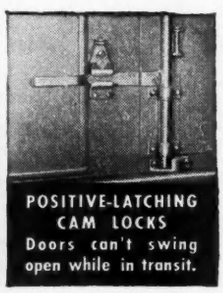
ALL-WELDED STEEL DOORS
Precision made—combining lightness with no-sag strength—no wood to swell or splinter.



"HAT-SHAPED" FLOOR CHANNELS
Sturdy steel sections run length of body—welded to each crossmember—for rigidity.



HEAVY-DUTY HINGES
Pressed steel—doors swing back flat against body sides.



POSITIVE-LATCHING CAM LOCKS
Doors can't swing open while in transit.

BODY DIVISION **FRUEHAUF TRAILER COMPANY • DETROIT 32**

FRUEHAUF TRUCK BODIES

Washington Runaround

(CONTINUED FROM PAGE 80)

Ice Test Data Analyzed

The results of the 1948 Winter Traction Tests held at Clintonville, Wis., will not be available for many weeks, according to Carl Saal, of the Public Roads Administration, chairman of the joint committee which conducted the tests under the auspices of the National Safety Council.

The data is now being analyzed and summarized and will be submitted to the committee before a decision is reached on the advisability of releasing the final report.

While it is admitted that these ice tests provided considerable valuable data, particularly on the front-wheel brake problem, it is also pointed out that this year's work was of a preliminary nature. Additional tests will be necessary to work out many of the detailed problems and it is likely that another set of ice tests will be run next winter.

Truck Traffic Up 15.6%

Truck traffic is increasing more rapidly than any other type of highway transportation, according to reports received by the Public Roads Administration from state authorities.

Figures for 1947 are incomplete, but reports from approximately half of the states indicate that travel by all types of trucks and truck combinations during the year exceeded the 1946 total in the states reporting by 15.6 per cent, and was about 16 per cent above the 1941 total.

Movement of goods by truck in 1947 was estimated at 86 billion ton-miles, or 17 per cent more than in 1946 and 46 per cent above the 1941 total.

Truck registrations rose from 4,859,244 in 1941, to approximately 6,500,000 in 1947, an increase of nearly 34 per cent. During the same period automobile registrations increased from 29,524,101 in 1941, to an estimated 30,545,000 in 1947.

Not only are there more trucks on the highways than ever before, but they are carrying heavier loads. The average load hauled by all types of trucks increased from 3.18 tons in 1941, to 4.36 tons, or 37 per cent, in 1947.

An increase in heavy axle loadings also was noted. Reports from states in all sections of the country indicated that the frequency of axle loads of 22,000 lb or more had doubled in 1947 as compared with 1946. The frequency of axle loads of 20,000 lb and over had risen about 70 per cent, and the frequency rate for axle loads of 18,000 or more increased approximately 33 per cent.

Compared with the 1936-1940 prewar period, the 1947 increases were 1000 per cent for axle loads of 22,000 or more, 450 per cent for axle loadings of 20,000 lb or more, and 600 per cent for loadings of 18,000 lb or more.

Rubber Quota Adequate

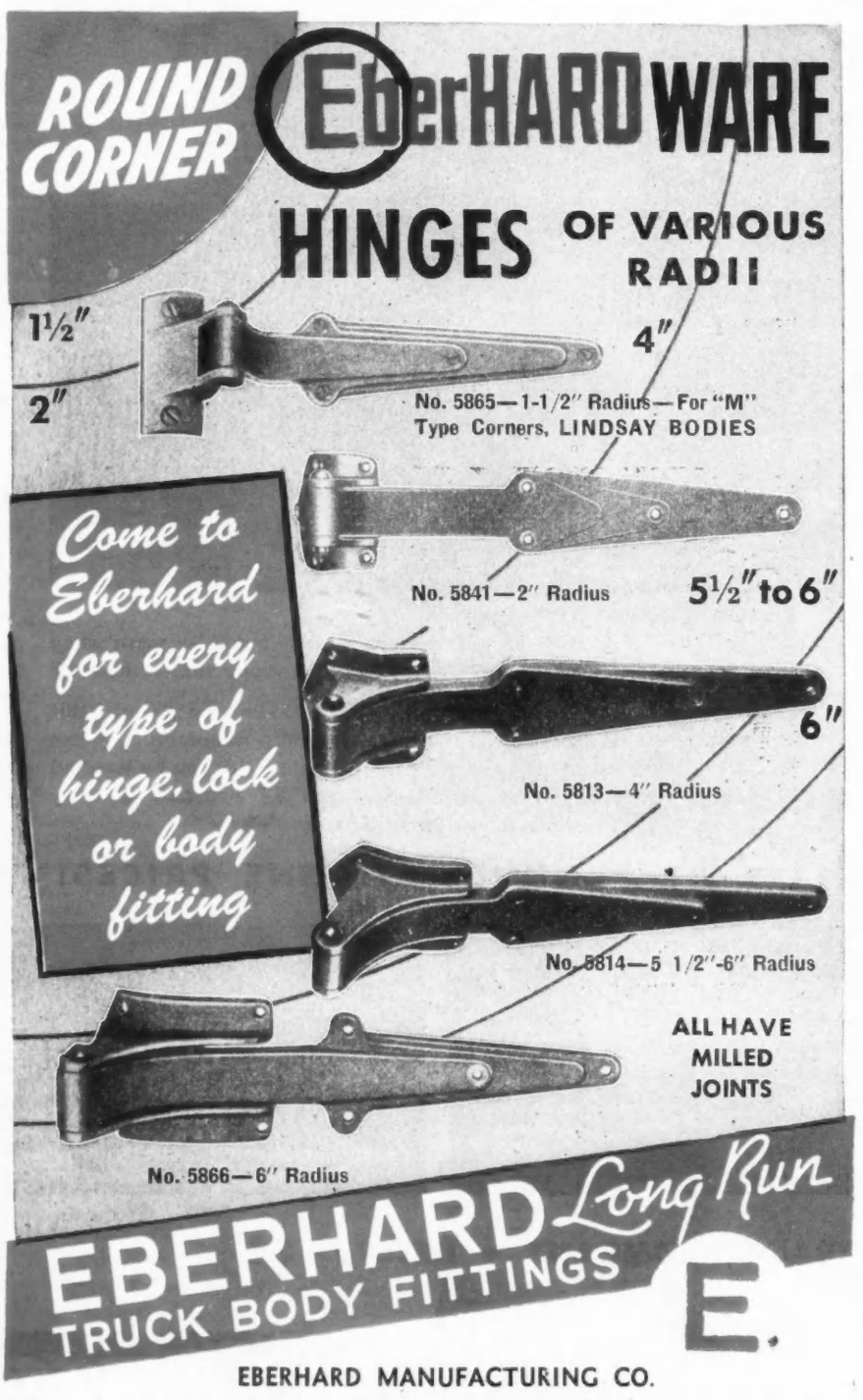
Resumption of control over the distribution of general purpose synthetic rubber by the Department of Commerce will not mean any drop in the production of tires. In fact, Commerce officials emphasize that this action will result in keeping tire output at peak levels.

Using the fourth quarter of 1947 as base, Commerce has established a first quarter allocation of about 53,000 tons of general purpose synthetic to manufacturers of transportation items, principally tires. Another 20,000 tons will be available for other products.

Quantities allocated to tire producers will be sufficient for the manufacture of the same number of units as were turned out in the base period.

Allocations were resumed in line with recommendations of the rubber industry, in view of shortages which have existed since November.

Meanwhile, legislation to assure continued operation of the synthetic rubber industry appears headed for Congressional approval. The measure before Congress will require the preservation of plants with an annual capacity of 675,000 tons of synthetic and also the actual output and use of at least 225,000 tons annually.



800 to Attend Portland Driver Clinic

OREGON'S trucking industry has bid for the national lead in safety activities with the opening of the Professional Driver Clinic in Portland this January. Sponsored jointly by the Oregon Motor Transport Association and Joint Council of Teamsters No. 37, the clinic will check commercial drivers regularly for physical fitness, special emphasis being placed on eye condition.

OMTA members are rapidly filling clinic schedules, most employers expressing a particular desire to have over-the-road men checked systematically. It is planned that the schedule will be fast enough to permit re-examination annually. Except in the cases of new-hires, the employers pay the $5.00 fee.

"The Oregon Motor Transport Association and the union are proud of the cooperation that makes this step possible," said E. A. Gritsch, OMTA president. "Good sense dictates the soundness of systematic driver selection and checking."

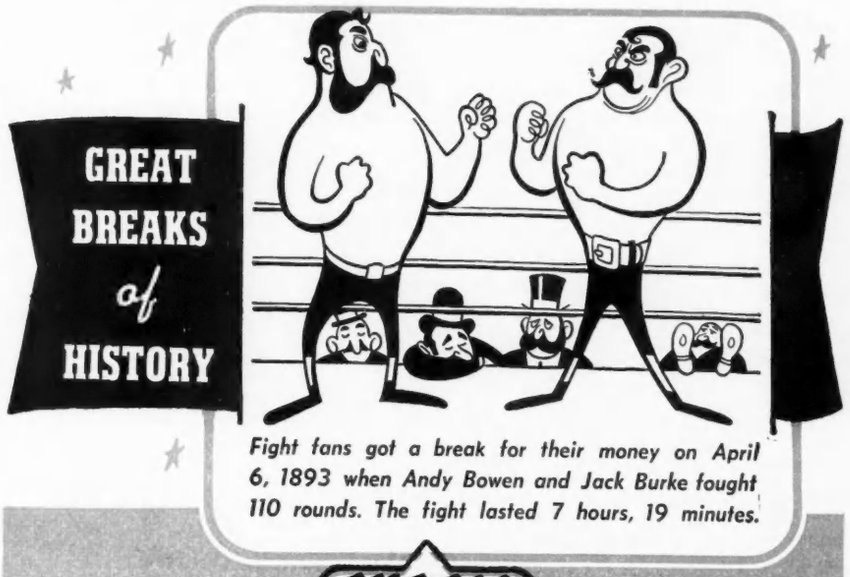
Left to right—Dr. Forrest Rieke, Professional Driver Clinic consultant; E. A. Gritsch, OMTA president; Jack Schlaht, teamsters local 162 executive sec'y; Roger Hald, driver for Silver Eagle Co., Portland

Some 800 drivers are expected to undergo the tests during the first year of Professional Driver Clinic operation. In charge of the examinations is Dr. Forrest Rieke, a specialist in industrial medicine. Dr. Rieke was a consultant for Kaiser shipyards during World War II.

Quiz Answers

CCJ QUIZ on P. 78

1. c. Fanning the brakes gives the brake drums a chance to cool, and you actually stop faster than if you jammed on the brakes.
2. b. 30 feet.
3. d. Castor oil. In addition to the alcohol and castor oil in the proper proportion, there are also special chemical reagents to counteract the action of the fluid on the metal and rubber parts of the system.
4. d. This will vary with the speed of the truck and the load, but on the average the brakes have to develop six times as much stopping power as the engine creates pulling power.
5. a. Use your gears and slow down before applying the brakes. This, plus a series of light moderate brake actions will usually avoid a skid on even the worst ice.
6. d. An Interstate Commerce Commission survey showed that the damage costs will average $1,152 where accidents are caused by defective brakes.
7. c. Stopping time, which is driver-reaction time plus actual braking time.
8. a. 1½ times the rate of speed will give the approximate distance in feet the truck will cover while the average driver is "thinking" about applying the brakes—the re-action time.
9. c. With self-energizing brakes of the Duo-Servo type, only about as much current is needed as to operate a tail-light . . . enough to actuate a magnet. It is between .002 and .01 watts per lb-ft of brake torque.
10. c. About 3½ sheets.



Fight fans got a break for their money on April 6, 1893 when Andy Bowen and Jack Burke fought 110 rounds. The fight lasted 7 hours, 19 minutes.

PHARIS
BRAKE BLOKS
MOLD-BLOK
BRAKE LINING
--for the
Great Brakes of Today!

★ Uniform co-efficient of friction
★ Lower cost per mile to operate
★ Non-scoring of drums
★ Non-squeal

MOLDED MATERIALS DIVISION
THE PHARIS TIRE & RUBBER CO. RIDGWAY, PA.

DETROIT DISPATCH

Front Brake Test Completed . . . Thermostatic Fan for Ford . . . Insurance Headache . . . Cost Ratio Up Demand for Mediums Slowing . . . Nash Trucks Delayed . . . Combination Couplers . . . N. Y. Bumper Bill

Front Brake Tests Completed

The front wheel brake driving tests conducted under the sponsorship of the National Safety Council were completed late in January near Clintonville, Wisc. Early reports indicate that the tests were quite successful and gave considerable valuable information which will be released soon to truck manufacturers. However, the tests are considered exploratory and more must be run before a definite conclusion is possible.

Thermostatic Fan for Ford

The thermostatically controlled engine fan described on page ... of this issue has been approved by the Ford Motor Co. as an accessory for passenger cars. Ford has not yet, however, recommended its use on trucks, but is still studying the problem before making a determination. It was thought earlier that the fan would be offered first on the 1949 models, but apparently development came along faster than expected. A thermostat control installed in the radiator hose cuts the fan in at a specified engine temperature and disengages it when the temperature drops below the cut-in point. In cold weather the fan is seldom engaged, providing quick warm up and a saving in fuel. It also gives a more uniform engine heat since cold air is not forced on the front of the block causing it to run colder than the rear part.

Insurance Headache

Insurance continues to be a headache for fleet operators. One large Detroit fleet manager reports that he hears rates are likely to go up again soon. He said not only are rates much higher than prewar but available sources for buying insurance are drying up. One contributing factor he said are that many insurance companies do not have the capital reserves required by law to take on new business. In other words, they are currently carrying all the business they can handle without expanding their capital.

Cost Ratio Up Sharply

This same operator reports that his cost ratio has increased sharply in recent months. His company did a $2 million business in 1947 with $20,000 profit. Since last October at the time of the last general wage increase his costs have been climbing rapidly and the company operated at a loss for the last four months of the year. His operating ratio currently is about 103. Another company which did a million dollars' worth of business wound up $5,000 in the red. Another truck freight rate increase will be sought soon, he said. One talking point will be that truck rates are now below those established for the rails.

Demand For Mediums Slowing

There are scattered reports from time to time of a slowing up in the market for medium-weight trucks. A dealer handling one of the Big Three lines reports that he recently received four trucks from the factory of which he sold three with no difficulty but he had to exercise some aggressive selling to get rid of the fourth.

Nash Trucks Delayed

It appears that the new Nash truck will not be available to the domestic market for quite a while yet. Nash currently is building a few trucks for export use, but these are built in knocked-down form and consist only of cowl and chassis with no rear fenders, cab, or body. Production for the home market will have to wait until more steel is available, but meanwhile the company is getting manufacturing experience and ironing out engineering kinks with the few it is able to build for export.

"What a day! And not a soul at the office asked for a raise so I could let off steam!"

Combination Couplers

We hear that experiments with a new coupling device designed to simplify the connection of brake hose and electric wires between cabs and semis have been pronounced very successful. The coupler incorporates an air brake connector and an electrical plug in one unit. Fleets testing it found that it works very fast, that connections are foolproof, locking is secure, and wear and tear on the electric lines and air hose is considerably reduced. Production wont start for a few months. In the meantime, another model combining hydraulic and electric connectors is being readied for testing. Strick Co., a Philadelphia trailer manufacturer, developed these devices.

New York Bumper Bill

Although the SAE committee on bumper height standardization opposes standardization of rear bumpers on trucks, operators in New York state may have to face the problem anyway. A bill in the New York state legislature proposes to make it unlawful after next Jan. 1 to operate trucks, trailers or semi-trailers unless they are equipped with rear bumpers that will match bumpers or guards of other motor vehicles to prevent rear overhang from causing damage in rear-end collisions.

'49 Mercurys Underway

Production of the first 1000 1949 Mercury cars is underway at the Ford Rouge plant. The changeover is being made as rapidly as possible, and in order to minimize layoffs, branch plants continued to operate until the end of February. As many as possible of the employes on the Mercury line have been switched over to Ford production. The Mercury undoubtedly will be announced to the public late in April.

It is reliably reported that the new Mercury and the smaller of the new Lincoln models will have the same basic body shell. Considerable manufacturing economy can be realized from such an arrangement which is similar to that which General Motors has been following for several years with its A, B, and C body series. The cost of tooling the 1949 Lincoln and Mercury lines is set at approximately $50 million.

Moving "Ice Cream Mountain" with WHITE SUPER POWER

WALGREEN CO. has moved a mountain of ice cream in White Trucks since the first White went in Walgreen service nearly 30 years ago.

Efficient, rapid and economical distribution that White Super Power provides Walgreen in keeping 415 retail outlets throughout the nation supplied with delicious ice cream . . . all year 'round . . . is typical of White performance for leaders in the industry, from dairy farms to corner stores.

Correctly selected for the work they do, White Super Power Trucks assure truck efficiency and economy in this and every truck-using industry.

Dependable and economical for more years of hard service, White Super Power can add distribution efficiency to your business and save on truck operating costs, as your White Representative will gladly explain.

SAVE ON FUEL COSTS WITH WHITE TRUCKS

Truck owners everywhere report even greater dividends from White Super Power performance, as fuel shortages and higher costs make *extra* efficiency *extra* profitable.

The efficient Super Power Engine, with higher horsepower per cubic inch of displacement than ever before, adds *extra* mileage per gallon of gasoline and *extra* years of dependable, low-cost service.

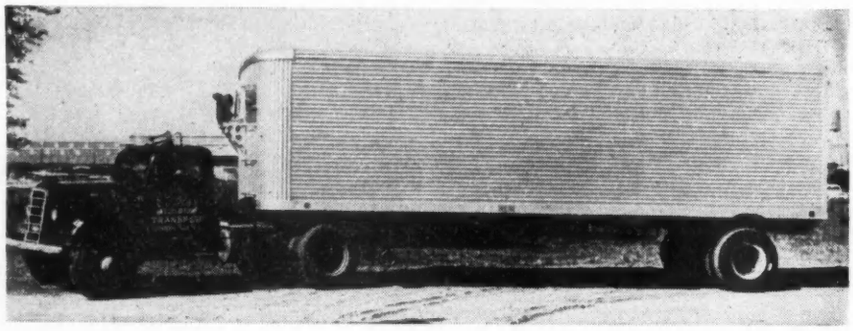
The Gas-Saver Engine Tune-Up now being offered at your nearest White Service Station guarantees top engine efficiency and fuel economy for all makes, all models in your fleet.

White

THE WHITE MOTOR COMPANY • CLEVELAND, OHIO

For more than 45 years the greatest name in trucks

Mineral Wool for Insulation



The Steel Products Co. of Savannah, Ga., has specified the felt form of mineral for insulating all panels of its Great Dane Trailers. These trailers are specially designed for the transportation of perishable fruits and vegetables, and are extensively used in shipping produce from southern production and processing centers to northern and eastern markets. They are constructed of alloy sheet steel and range from 20 ft. to 40 ft. in length. they have an overall width of 7 ft. 7¼ in. and an exterior height of 6 ft. 9¾ in. A 1½ in. felt thickness of low thermal conductivity mineral wool is installed inside the steel sheet of the truck. A 2¾ hp Briggs and Stratton motor, mounted on the outside of the truck, drives a Brundage blower. The blower is mounted on top of the ice bunker, and distributes cold air throughout the cargo space of the van.

Big Trucker Finds the Solution to Yard-Switching Problems

BRIDGEWAYS, INC., Detroit, facing the difficulties common to yard-switching, last summer installed a Pollard 5th Wheel Hydraulic Platform on one of the tractor trucks at its Detroit terminal. Three months' performance proved so satisfactory that the company purchased a second unit for its Chicago terminal. *In the words of Tom Garrison, Superintendent of Transportation:*

"Switching in our yard is no longer a problem since we bought our 5th Wheel Hydraulic Platform."

• *Write for Literature* •

C. E. POLLARD CO.

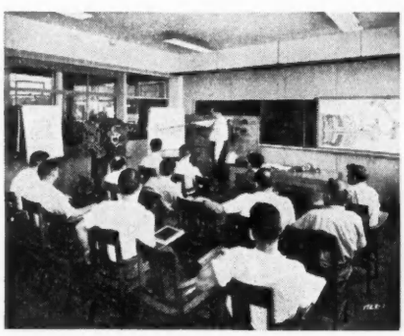
14571 Schaefer Road **Detroit 27, Mich.**

Pollard

5TH WHEEL
HYDRAULIC PLATFORM

GM COACH DIESEL SCHOOL

General Motors Coach has established a training school for motor coach mechanics to teach the proper maintenance and overhaul of the GM series 71 Diesel engine. More than 1000 students representing 200 operating properties have already been graduated from the training classes.



The course is set up so that the mechanic learns by a practical method. He receives his instruction on the type of equipment he will work on every day. All work is performed with tools and special equipment recommended for adequate servicing in the shop. Correct procedures and precautions are taught for engine removal and replacement, transmission removal and replacement and the overhaul and maintenance of the entire power plant. All operations are taught and performed in strict conformance to the recommended practices established by the manufacturer. These practices are designed to enable the units to yield their maximum dependability and long life.

The diesel program is of two weeks duration. The hydraulic drive school runs one week. Class room and laboratory sessions are balanced so that the principles of construction and operation are explained to the students through lectures and demonstrations before actual work on the unit is performed. This is followed in many cases by further class discussion, after the laboratory sessions, for the purpose of clarifying and emphasizing important points which are essential to a thorough knowledge of the subject.

Truck Specifications Table

OF CURRENT PRODUCTION MODELS

DATA SUPPLIED BY MANUFACTURERS AND TABULATED BY

COMMERCIAL CAR JOURNAL

Key to Definitions, References and Abbreviations

DEFINITIONS

MAKE AND MODEL
Only Domestic Truck Models are listed.

OPTIONAL UNITS

For the express purpose of best fitting the truck to the individual job most of the models listed can be provided with optional engines, transmissions, axles, etc., and these models when so equipped are considered standard stock models.

CHASSIS LIST PRICE

The chassis list price applies to the minimum standard wheelbase with standard tires and standard equipment. All prices are F.O.B. factory. Chassis list price does not include the price of the Cab unless otherwise noted.

RECOMMENDED GROSS VEHICLE WEIGHT FOR NORMAL SERVICE

The Gross Weights published herewith are those supplied by manufacturers as their Recommended Gross Vehicle Weights for Normal Operating Conditions, and are based upon the Maximum Authorized Tire Size listed. In actual practice the manufacturer may either increase or decrease the gross vehicle weight rating when either favorable or unfavorable operating conditions are involved. Since the proper performance of a motor truck depends upon many factors, including grades, road conditions, etc., the gross weights that a manufacturer is prepared to recommend will vary with particular conditions, and the manufacturer's own standard of safety factors. Specific recommendations, therefore, should be obtained from the manufacturer's representative.

CHASSIS WEIGHT

The chassis weight listed includes the weight of the minimum standard wheelbase chassis, with cowl, with standard tires, with standard equipment, with crankcase and cooling system full, and 5 gallons of fuel in the tank. It does not include the weight of the Cab. This applies to C.O.E. as well as conventional chassis types. Exceptions are noted.

STANDARD TIRE SIZE

The standard tire size listed is that which is included in the Chassis List Price.

MAXIMUM AUTHORIZED TIRE SIZE

The tire size listed in this column is the maximum size recommended by the manufacturer of the chassis for the Gross Vehicle Weight for Normal Operating Conditions. It is furnished at extra cost, if it differs from the standard size. Dual rears are understood; exceptions noted.

MINIMUM STANDARD WHEELBASE

The minimum standard wheelbase is the so-called standard wheelbase on which the Chassis List Price is based.

MAXIMUM STANDARD WHEELBASE

The maximum standard wheelbase is the extreme end of the standard range of wheelbases offered by the chassis maker.

MAXIMUM BRAKE HP.

Maximum Brake Horsepower at Given R.P.M. is actual dynamometer reading without accessories.

GEAR RATIO RANGE

Gear Ratio Range in High—Ratios within the range given are available at no extra cost. Exceptions are noted.

TRACTORS

Unless given the designation (N)—meaning not available as a tractor—all standard models may be assumed to be available as tractors. Exclusively Tractor models are designated (T).

KEY TO REFERENCES

c.f.—Cab Forward design.
c.o.e.—Cab-Over-Engine design.
(D)—Diesel-engine equipped.
(T)—Designed for tractor use only.
(C)—Converted Ford or Chevrolet Model.

(2) **International Harvester**—Specifications shown represent only the basic standard chassis units and standard chassis ratings in keeping with definitions established by Commercial Car Journal. Optional units not shown such as engines, clutches, transmissions, axles or axle ratios, brakes, wheels and tires, frames or frame reinforcements, optional wheelbases or any other units which make up part of the truck chassis and which International will furnish and approve from the factory as optional equipment can or will change either the ratings, chassis weight shown or performance of the truck as indicated by this list.

Also the company reserves the privileges of assigning special gross vehicle ratings for any chassis providing in the opinion of its engineering department, the type of service justifies the new rating w. hout decreasing the safety factor designed into the truck.

(a)—Available with Two-Speed Axle designated KBS Models.

KEY TO ABBREVIATIONS

MAKES—ALL

B—Bendix
BL—Brown-Lipe.
Bu or Bud—Buda.
BW—Bendix-Westinghouse
C—Chevrolet.
Cl or Cla—Clark.
Con—Continental.
Cum—Cummins-Diesel.
Eat—Eaton.
F—Ford.
Fu—Fuller.
H—Hotchkiss.
Her—Hercules.
L—Lockheed.
LH—Lockheed front, Wagner "hi-Tork" rear.
LW—Lockheed front, Wisconsin rear.
M—Midland.
N.P.—New Process.
O or Ow—Own.
Op or Opt—Optional.
Shu—Shuler.
Spi—Spicer
T or Tim—Timken.
Tw—Timken-Westinghouse
TW—Timken-Wisconsin.
VQ—Warner Gear.
Wau—Waukesha.
W or Wis—Wisconsin.
Ws—Westinghouse.
WW—Westinghouse or Wagner

WHEELS DRIVEN

2F—Forward unit of Rear Axle Group.
2R—Rear Unit of Rear Axle Group
4R—Forward and rear units of Rear Axle Group.
6—All wheels.

BRAKES—SERVICE

Location

4—Four Wheels, front and rear.
4r—Four Wheels, rear only.

Type

I—Internal.
X—External.

Operation

A—Air.
H—Hydraulic.
V—Vacuum.
D or Dp—Dual Primary

BRAKES—HAND

Location

C—Center of double propeller shaft.
2—Rear wheels.
4—Four wheels.
6—Six wheels.
P—Back of Power Divider.
J—Jackshaft.
T—Transmission.
F—Driveshaft.

Type

D—Tru-Stop disk.
I—Internal.
M—Mechanical.
X—External.
PD—Two drums on rear of power divider.

BRAKE DRUMS

Material

a—Cast alloy iron.
A—American Car Foundry
c—Cast iron.
Cc—Composite Front, Cast Iron in rear.
Ci—Copper iron.
Co—Composite.
D—Dayton.
E—Ermalite.
G—Gunite.
N—Nickel iron.
S—Steel.

(Where a combination of any of the above is used, the first reference mark applies to the front and the second to the rear drums.)

FRAME

Type

C—Channel.
T—Channel tapered front and rear.
L—Channel reinforced with liner.
B—Channel reinforced with both liner and fishplate.
P—Channel reinforced with plate.
TL—Channel tapered front and rear reinforced with liner.
D—Drop Center
Tf—Tapered front.
A—Straight section sidemembers, lined with oak inserts.
Z—Reinforced (X) member frame, box type sections.

REAR AXLE

Final Drive and Type

B—Bevel.
CD—Chain Drive
F—Full-floating.
H or Hy—Hypoid.
d—Dual range axle.
2—Double Reduction.
S—Spiral bevel.
W—Worm.
¾—Three Quarters Floating.
½—Semi-Floating
T—Torque Tube

GEAR RATIOS

(**) Only one ratio.

Drive and Torque

H—Hotchkiss (springs).
R—Radius Rods.
L—Parallel Torque Rods
T—Torque Arm.

GOVERNOR STANDARD

Y—Yes.
N—No.

(Continued from Page 91)

Line Number	MAKE AND MODEL	Chassis List Price	WHEELBASE Minimum Standard	WHEELBASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES (D-dual rear S-single rear) Standard Front and Rear	TIRE SIZES Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS Make and Model	No. of Cylinders; Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings Number, Diameter and Length	Governor Standard	TRANSMISSION Make and Model	TRANSMISSION Forward Sp'ds	REAR AXLE Make and Model	REAR AXLE Gear and Type	REAR AXLE Drive & Torque	REAR AXLE Gear Ratio Range in High	FRONT AXLE Make and Model	BRAKES SERVICE Make Location Type Operat'n	BRAKES SERVICE Lining Area	BRAKES SERVICE Drum Area	BRAKES SERVICE Drum Material	BRAKES Hand Location Type	C-A Dimensions (Min. Std. W. B.)	FRAME Side Rail Dimensions	FRAME Type
	Available																														
1	CS200-SP		126	133	15000		7.00/20D	7.50/20	Wau 6BM	6–3⅝x4¼	263	5.9	180	78–2800	7–2¾x10¼	N	WG T9	4	Tim 53440H	SF	H	** –6.67	Tim 32502H	L4IH				TX	Opt	10x3x¼	T
2	C-250-SP		105		18000		7.50/20D	8.25/20	Wau 6BZ	6–4x4½	320	5.9	210	95–2500	7–2¾x10¼	N	Fu 5A330	5	Tim 54411H	SF	R	6.83–7.4	Tim 32502H	L4IH	334	583	a	TX	Opt	10x3x¼	T
3	CS-250-SP		105		20000		8.25/20D	9.00/20	Wau 6BZ	6–4x4½	320	5.9	210	95–2500	7–2¾x10¼	N	Fu 5A330	5	Tim 54411H	SF	R	6.83–7.4	Tim 32502H	L4IH	334	583	a	TX	Opt	10x3x¼	T
4	CS-400-LSP		105		21500		9.00/20D	10.00/20	Wau 6BZ	6–4x4½	320	5.9	210	95–2500	7–2¾x10¼	N	Fu 5A330	5	Tim 56410H	SF	R	6.83–7.4	Tim 35000H	L4IH	334	583	a	TX	Opt	12x3x¼	T
5	CS-500-SP		105		22000		9.00/20D	10.00/20	Wau 6MZA	6–4¼x4¾	404	5.9	286	112–2500	7–2⅝x12½	Y	Fu 5F430	5	Tim 56410H	SF	R	6.83–7.4	Tim 35000H	L4IH	334	583	a	TX	Opt	12x3x¼	T
6	CS-550-SP		105		24000		9.00/20D	10.00/20	Wau 6MZA	6–4¼x4¾	404	5.9	286	112–2500	7–2⅝x12½	Y	Fu 5F430	5	Tim 58300H	SF	R	6.83–7.4	Tim 35000H	L4IH	380	660	a	TX	Opt	12x3x¼	T
7	CS-550-SPX		112		32000		10.00/20D	11.00/20	Wau 6MZA	6–4¼x4¾	404	5.9	286	112–2500	7–2⅝x12½	Y	Fu 5F430	5	Tim 8200H	2F	R	** –7.84	Tim 26450H	L4IH	570	1051	a	TX	Opt	14x3x☆	T
8	CS-600		Opt	Opt	36000		11.00/20	11.00/24	Wau 6SRKR	6–4⅝x5½	517	5.9	365	125–2300	7–2⅝x12½	Y	Fu 5F430	5	Tim 8200PA	2F	R	** –7.84	Tim 27452TW	L4IH	722	1051	a	TX	Opt	14x3x☆	T
9	CS-600-SP		Opt	Opt	40000		11.00/20	11.00/24	Wau 145GK	6–5¼x6	779	5.6	590	186–2000	7–3½x17¾	Y	Spl 7841▽	8	Tim 8200PA	2F	R	6.42–7.84	Tim 27452TW	L4IH	722	1051	a	TD	Opt	14x3x☆	T
10	(D)CS-600-SP.Opt.		Opt	Opt	40000		11.00/20	11.00/24	Cum HB600	6–4⅞x6	672	17	510	150–1800	7–4½x16½	Y	Spl 7841▽	8	T SW3012PA	WF	R	** –6.16	Tim 27452TW	L4IH			A	TD	Opt	14x3x☆	T
11	Biederman...NSH		130	190	21000	6070	8.25/20D	10.00/20	Her JXLD	6–4x4½	339	6.9	272	131–3200	7–2½x10¼	N	Fu 5A330	5	TimH700DPH	SF	H	** –7.2	Tim 35000HX	LH4IH	514	744	G	T	60	9x3x¼	C
12	NSD		130	190	21000	6070	8.25/20D	10.00/20	Her JXLD	6–4x4½	339	6.9	272	131–3200	7–2½x10¼	N	Fu 5A330	5	TimH700DPH	2D	H	6.13–8.15	Tim 35000HX	LH4IH	514	744	G	T	60	9x3x¼	C
13	Chevrolet.....FP	790	116		4600		6.00/16S	15S	O-Thrift Mas.	6–3½x3¾	216	6.5	174	90–3300	4– ♦ ♦	N	Own	3	Own	Hy	T	** –4.11	Own	O4IH	159	242	Co	2I	39	5¾x2¼x⅞	C
14	FR	885	125		♦5800		15S	7.00/17S	O-Thrift Mas.	6–3½x3¾	216	6.5	174	90–3300	4– ♦ ♦	N	Own	3	Own	HyF	H	** –4.57	Own	O4IH	178	272	Co	2I	48¼	5¾x2¼x⅞	C
15	FS	930	137		8800		7.00/17S	7.00/18	O-Thrift Mas.	6–3½x3¾	216	6.5	174	90–3300	4– ♦ ♦	N	Own	4	Own	HyF	H	** –5.14	Own	O4IH	243	371	Co	2I	60	7x2¾x⅞	C
16	RJ	1020	137		12500		7.00/20S	7.50/20	O-Thrift Mas.::	6–3½x3¾	216	6.5	174	90–3300	4– ♦ ♦	N	Own	4	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	60	7x2¾x⅞	C
17	RK	1050	161		12500		7.50/20S	7.50/20	O-Thrift Mas.::	6–3½x3¾	216	6.5	174	90–3300	4– ♦ ♦	N	Own	4	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	84	8¼x2⅞x1¼	C
18	(School bus) RJ	1195	161		12000		6.50/20D	7.00/20	O-Thrift Mas.::	6–3½x3¾	216	6.5	174	90–3300	4– ♦ ♦	Y	Own	4	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I		8¼x2⅞x1¼	C
19	RVS	1410	137		15000		7.50/20D	8.25/20▲	O-Load Mas.	6–3⅞x3¾	235	6.6	192	93–3100	4– ♦ ♦	Y	Own	4	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	60	8¼x2⅞x1¼	C
20	RWS	1430	161		15000		7.50/20D	8.25/20▲	O-Load Mas.	6–3⅞x3¾	235	6.6	192	93–3100	4– ♦ ♦	Y	Own	4	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	84	8¼x2⅞x1¼	C
21	(c.o.e.) RPS	●1715	110		15000		7.50/20D	8.25/20▲	O-Load Mas.	6–3⅞x3¾	235	6.6	189	90–3100	4– ♦ ♦	Y	Own	4	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	60½	8¼x2⅞x1¼	C
22	(c.o.e.) RRS	●1755	134		15000		7.50/20D	8.25/20▲	O-Load Mas.	6–3⅞x3¾	235	6.6	189	90–3100	4– ♦ ♦	Y	Own	4	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	84½	8¼x2⅞x1¼	C
23	(c.o.e.) RSS	●1775	158		15000		7.50/20D	8.25/20▲	O-Load Mas.	6–3⅞x3¾	235	6.6	189	90–3100	4– ♦ ♦	Y	Own	4	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	108½	8¼x2⅞x1¼	C
24	(c.o.e.) RP	●1715	110		16000		7.50/20D	8.25/20	O-Load Mas.	6–3⅞x3¾	235	6.6	189	90–3100	4– ♦ ♦	Y	Own	4	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	60½	8¼x2⅞x1¼	C
25	(c.o.e.) RR	●1755	134		16000		7.50/20D	8.25/20	O-Load Mas.	6–3⅞x3¾	235	6.6	189	90–3100	4– ♦ ♦	Y	Own	4	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	84½	8¼x2⅞x1¼	C
26	(c.o.e.) RS	●1775	158		16000		7.50/20D	8.25/20	O-Load Mas.	6–3⅞x3¾	235	6.6	189	90–3100	4– ♦ ♦	Y	Own	4	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	108½	8¼x2⅞x1¼	C
27	RV	1410	137		16000		7.50/20D	8.25/20	O-Load Mas.	6–3⅞x3¾	235	6.6	192	93–3100	4– ♦ ♦	Y	Own	4	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	60	8¼x2⅞x1¼	C
28	RW	1430	161		16000		7.50/20D	8.25/20	O-Load Mas.	6–3⅞x3¾	235	6.6	192	93–3100	4– ♦ ♦	Y	Own	4	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I	84	8¼x2⅞x1¼	C
29	(School bus) RX	1475	199		15000		7.50/20D	8.25/20	O-Load Mas.	6–3⅞x3¾	235	6.6	192	93–3100	4– ♦ ♦	Y	Own	4	Own	HyF	H	6.17	Own	O4IH	330	478	Co	2I		8¼x2⅞x1¼	C
30	Corbitt■.....18BG		181		18000		9.00/20	10.00/20	Con M6330	6–4x4⅜	330	6.1	246	104–2800	7–2¾x12	Y	Cla 205V	5	TimH100DPH		H	**–5.29	Tim 32502H	B4IHV			a	TX		8x3¼x1¼	T
31	22BG		190		22000		10.00/20	10.00/22	Con B6371	6–4½x4⅝	3716	6.0	280	100–2600	7–2¾x13½	Y	Fu 5A43	5	TimL100DPH		H	**–5.29	Tim 35000H	B4IHV			a	TX		8x3¼x1¼	T
32	25BG		200		25000		10.00/22	11.00/22	Con B6427	6–4⅞x4⅞	4275	9.3	325	127–2600	7–2¾x13½	Y	Fu 5A43	5	Tim Q100P		H	**–6.17	Tim 35100TW	Ws4IA			a	TX		8¼x3¼x⅞	T
33	(T) 18TG		137		18000		9.00/20	10.00/20	Con M6330	6–4x4⅜	330	6.1	246	104–2800	7–2¾x12	Y	Cla 205V	5	Tim H100P‡♦		H	**–5.29	Tim 32505TW	Ws4IA			a	TX		7¼x3¼x⅞	T
34	(T) H18TG		137		18000		10.00/20		Con M6330	6–4x4⅜	330	6.1	246	104–2800	7–2¾x12	Y	Cla 205V	5	Tim L100P‡♦		H	**–5.29	Tim 32505TW	Ws4IA			a	TX		7¼x3¼x⅞	T
35	(T) 22TG		144		22000		10.00/20	10.00/22	Con B6427	6–4⅞x4⅞	4275	9.3	325	127–2600	7–2¾x13½	Y	Fu 5A43	5	Tim L100P‡♦		H	**–5.29	Tim 35000TW	Ws4IA			a	TX		8x3¼x¼	T
36	(T) H22TG		144		22000		10.00/22		Con B6427	6–4⅞x4⅞	4275	9.3	325	127–2600	7–2¾x13½	Y	Fu 5A43	5	Tim Q100P‡♦		H	**–5.29	Tim 35100TW	Ws4IA			a	TX		8x3¼x¼	T
37	(T) 25TG		148		25000		10.00/22	11.00/22	Con R6513	6–4½x5⅝	5135	9.4	400	170–2600	7–3¼x—	Y	Spl 6253		Tim Q100P‡♦		H	**–6.17	Tim 35100TW	Ws4IA			a	2		8¼x3¼x⅞	T
38	(T) H25TG		148		25000		10.00/22		Con R6513	6–4½x5⅝	5135	9.4	400	170–2600	7–3¼x—	Y	Spl 6253		Tim R100P‡♦		H	**–6.17	Tim 35100TW	Ws4IA			a	2		8¼x3¼x⅞	T
39	(T) 28TG		147		28000		10.00/22	11.00/24	Con R6602	6–4⅞x5⅞	6025	9.4	484	199–2600	7–3¼x—	Y	Fu 5A650		Tim 8200P‡♦		H	**–6.42	Tim 26450TW	Ws4IA			a	2D		8¼x3¼x⅞	T
40	(D) (T) 22TD		144		22000		10.00/20	10.00/22	Her DWXD	6–4¼x4¾	404	15	320	135–2600		Y	Fu 5A430		Tim L300P		H	6.32–8.20	Tim 35000TW	Ws4IA			a	TX		8x3¼x¼	T
41	(D) (T) H22TD		144		22000		10.00/22		Her DWXD	6–4¼x4¾	404	15	320	135–2600		Y	Fu 5A430		Tim Q300P		H	6.53–8.53	Tim 35100TW	Ws4IA			a	TX		8x3¼x¼	T
42	(D) (T) 25TD		148		25000		11.00/20	11.00/22	Her DRXC	6–4⅝x5¼	529	14	400	148–2200	7–3½x13¾	Y	Spl 6253		Tim Q300P		H	6.53–8.53	Tim 35000TW	Ws4IA			a	2		8¼x3¾x⅞	T
43	(D) (T) H25TD		148		25000		10.00/22		Her DRXC	6–4⅝x5¼	529	14	400	148–2200	7–3½x13¾	Y	Spl 6253		Tim R300P		H	6.53–8.53	Tim 35000TW	Ws4IA			a	2		8¼x3¼x⅞	T
44	(D) (T) 27TD		152		27000		10.00/22	11.00/24	Cum HB600	6–4⅞x6	672	17	500	150–1800	7–4½x16½	Y	Fu 5A920		Tim Q100P‡♦		H	5.29	Tim 26450W	Ws4IA			a	2		8¼x3¼x⅞	T
45	(D) (T) H27TD		152		27000		10.00/22		Cum HB600	6–4⅞x6	672	17	500	150–1800	7–4½x16½	Y	Fu 5A920		Tim R300P		H	4.92–6.42	Tim 26450W	Ws4IA			a	2		8¼x3¼x⅞	T
46	(D) (T) 28TD		155		28000		10.00/22	11.00/24	Cum NHB600	6–5⅛x6	743	15	575	200–2100		Y	Fu 5A920		Tim S200P‡♦		H	6.42	Tim 26450W	Ws4IA			a	2D		8¼x3¼x⅞	T
47	Crosley.....B		80		1680		4.50/12		Own CE7	4–2½x2¼	44	7.5	33	26–5400	5–♦		WG-ASI-T92	3	Spl	2F		** –5.17	Own	Haw M	64	72	C					
48	Dodge.....B-1-B		108	108	4850		6.00/16-S	6.50/16-S	Own T-142	6–3¼x4⅜	2176	6.6	172	95–3600	4–2⅛x4.8	N	NP-39750	3	Own T-142	HyS	H	4.1–4.7	Own T-142	O4IH	174	264	Ce	TX	40	⅞x2⅛x6⅛	C
49	B-1-C		116	116	5500		TA-15-S	TA-15-S	Own T-144	6–3¼x4⅜	2176	6.6	172	95–3600	4–2⅛x4.8	N	NP-39750	3	Own T-144	HyS	H	4.1–4.7	Own T-144	O4IH	184	276	Ce	TX	48	⅞x2⅛x6⅛	C
50	B-1-D		116	126	7500		6.00/16S◇	6.00/20	Own T-146	6–3¼x4⅝	2306	6.7	184	102–3600	4–2⅛x4.8	N	NP-39980	3	Own T-146	HyS	H	3.9–4.8	Own T-146	O4IH	212	316	Ce	TX	48	⅞x2⅛x6⅛	C
51	B-1-FL		128	152	9000		6.00/20D‡	6.50/20	Own T-148	6–3⅛x4¼	2366	6.6	192	109–3600	4–2½x5.054	N	NP-39670	4	Own T-148	HyF	H	5.6–6.8	Own T-148	O4IH	336	479	Ce	TX	60	21x2¾x7	C
52	B-1-F		128	192	14500		6.00/20D‡	7.50/20	Own T-148	6–3⅛x4¼	2366	6.6	192	109–3600	4–2½x5.054	N	NP-39670	4	Own T-148	HyF	H	5.6–6.8	Own T-148	O4IH	336	479	Ce	TX	60	21x2¾x7	C
53	B-1-FA		128	192	14500		6.50/20-10	7.50/20	Own T-148	6–3⅛x4¼	2366	6.6	192	109–3600	4–2½x5.054	N	NP-39670	4	Eat A5-1350	SFd	H	5.8–8.1	Own T-148	O4IH	336	479	Ce	TX	60	21x2¾x7	C
54	B-1-H		128	192	15500		7.00/20▲	8.25/20	Own TX-148	6–3⅛x4¼	2366	6.6	192	109–3600	4–2½x5.054	N	NP-39670	4	Own TX-148	HyF	H	5.6–6.8	Own TX-148	O4IHV	336	479	Ce	TX	60	21x2¾x7	C
55	B-1-HA		128	192	15500		7.00/20▲	8.25/20	Own TX-148	6–3⅛x4¼	2366	6.6	192	109–3600	4–2½x5.054	N	NP-39670	4	Eat A5-1350	SFd	H	5.8–8.1	Own TX-148	O4IHV	336	479	Ce	TX	60	21x2¾x7	C
56	B-1-FM		107	161	14750		6.00/20‡8	7.50/20	Own T-152	6–3⅛x4¼	2366	6.6	192	109–3600	4–2½x5.054	N	NP-88070	4	Own T-152	HyF	H	5.6–6.8	Own T-152	O4IH	336	479	Ce	TX	60	⅞x2¾x7	C
57	B-1-FMA		107	161	14750		6.50/20-10	7.50/20	Own T-152	6–3⅛x4¼	2366	6.6	192	109–3600	4–2½x5.054	N	NP-88070	4	Eat A5-1350	SFd	H	5.8–8.1	Own T-152	O4IH	336	479	Ce	TX	60	⅞x2¾x7	C
58	B-1-HM		107	161	15750		7.00/20▲	8.25/20	Own TX-152	6–3⅛x4¼	2366	6.6	192	109–3600	4–2½x5.054	N	NP-88070	4	Own TX-152	HyF	H	5.6–6.8	Own TX-152	O4IHV	336	479	Ce	TX	60	⅞x2¾x7	C
59	B-1-HMA		107	161	15750		7.00/20▲	8.25/20	Own TX-152	6–3⅛x4¼	2366	6.6	192	109–3600	4–2½x5.054	N	NP-88070	4	Eat A5-1350	SFd	H	5.8–8.1	Own TX-152	O4IHV	336	479	Ce	TX	60	⅞x2¾x7	C
60	B-1-JL		128	212	16500		6.00–20D	8.25/20	Own T-150	6–3⅛x4½	2506	6.2	204	114–3600	4–2½x5.054	Y	NP-38910	5	Own T-150	HyF	H	6.2–7.1	Own T-150	O4IHV	396	553	C	TX	60	⅞x2⅜x8⅛	C
61	B-1-JAL		128	212	16500		6.00/20D	8.25/20	Own T-150	6–3⅛x4½	2506	6.2	204	114–3600	4–2½x5.054	Y	NP-38910	5	Eat A5-1350	SFd	H	5.8–8.1	Own T-150	O4IHV	396	553	C	TX	60	⅞x2⅜x8⅛	C
62	B-1-KAL		128	212	17000		8.25/20§	9.00/20°	Own TX-150	6–3⅛x4½	2506	6.2	204	114–3600	4–2½x5.054	Y	NP-38910	5	Eat A5-1350	SFd	H	6.1–8.5	Own TX-150	O4IHV	396	553	C	TX	60	⅞x2⅜x8⅛	C
63	B-1-JML		107	161	16750		6.00/20D	8.25/20	Own T-154	6–3⅛x4½	2506	6.2	204	114–3600	4–2½x5.054	Y	NP-88090	5	Own T-154	HyF	H	6.2–7.1	Own T-154	O4IHV	396	553	C	TX	60	⅞x2⅜x8⅛	C
64	B-1-JMAL		107	161	16750		6.00/20D	8.25/20	Own T-154	6–3⅛x4½	2506	6.2	204	114–3600	4–2½x5.054	Y	NP-88090	5	Eat A5-1350	SFd	H	5.8–8.1	Own T-154	O4IHV	396	553	C	TX	60	⅞x2⅜x8⅛	C
65	B-1-KMAL		107	161	17250		8.25/20§	9.00/20°	Own TX-154	6–3⅛x4½	2506	6.2	204	114–3600	4–2½x5.054	Y	NP-88090	5	Eat A5-1350	SFd	H	6.1–8.5	Own TX-154	O4IHV	396	553	C	TX	60	⅞x2⅜x8⅛	C
66	B-1-J		128	212	16500		6.50/20D	8.25/20	Own T-150	6–3⅛x4½	2506	6.2	204	114–3600	4–2½x5.054	Y	NP-38910	5	Own T-150	HyF	H	6.2–7.1	Own T-150	O4IHV	396	553	C	TX	60	⅞x2⅜x8⅛	C
67	B-1-JA		128	212	16500		6.50/20D	8.25/20	Own T-150	6–3⅛x4½	2506	6.2	204	114–3600	4–2½x5.054	Y	NP-38910	5	Eat A5-1350	SFd	H	5.8–8.1	Own T-150	O4IHV	396	553	C	TX	60	⅞x2⅜x8⅛	C
68	B-1-KA		128	212	17000		8.25/20§	9.00/20°	Own TX-150	6–3⅛x4½	2506	6.2	204	114–3600	4–2½x5.054	Y	NP-38910	5	Eat 13500	SFd	H	6.1–8.5	Own TX-150	O4IHV	396	553	C	TX	60	⅞x2⅜x8⅛	C
69	B-1-JM		107	161	16750		6.50/20D	8.25/20	Own T-154	6–3⅛x4½	2506	6.2	204	114–3600	4–2½x5.054	Y	NP-88090	5	Own T-154	HyF	H	6.2–7.1	Own T-154	O4IHV	396	553	C	TX	60	⅞x2⅜x8⅛	C
70	B-1-JMA		107	161	16750		6.50/20D	8.25/20	Own T-154	6–3⅛x4½	2506	6.2	204	114–3600	4–2½x5.054	Y	NP-88090	5	Eat A5-1350	SFd	H	5.8–8.1	Own T-154	O4IHV	396	553	C	TX	60	⅞x2⅜x8⅛	C
71	B-1-KMA		107	161	17250		8.25/20§	9.00/20°	Own TX-154	6–3⅛x4½	2506	6.2	204	114–3600	4–2½x5.054	Y	NP-88090	5	Eat 16500 lb.	SFd	H	6.1–8.5	Own TX-154	O4IHV	396	553	C	TX	60	⅞x2⅜x8⅛	C
72	B-1-R		130	229	18500		7.50/20D	9.00/20	Own T-156	6–3¾x4¼	2816	4.2	225	115–3200	7–3x11.2	Y	NP-38100	5	TimH100DPH	HyF	H	6.8–8.1	Own T-156	O4IHV	396	609	C	TX	60	⅞x2⅜x9⅛	C
73	B-1-RA		130	229	18500		7.50/20D	9.00/20	Own T-156	6–3¾x4¼	2816	4.2	225	115–3200	7–3x11.2	Y	NP-38100	5	Tim H-300	HyF	H	6.1–8.8	Own T-156	O4IHV	396	609	C	TX	60	⅞x2⅜x9⅛	C
74	B-1-T		130	190	21000		8.25/20§	10.00/20	Own T-158	6–3¼x5	3316	5.2	270	128–3000	7–3x11.2	Y	NP-38110	5	Tim L-100	HyF	H	6.8–8.2	Tim 32516A1	O4IHV	424	666	C	TX	60	¼x3x10	C

(Turn to Page 94, please)

◇—Rear only: front 8.25/20.
‡♦—Two speed axles available.
◻—Chevrolet own rear axle (5.43:1) available on Models RJ-RK-RL. Chevrolet own 2-speed rear axle (6.13-8.10:1) available at extra cost on Models RVS-RWS-RP-RPS-RR-RRS-RS-RSS-RV-RW-RX.
♦—7.50/17 tire is optional for Rear or Front and Rear, with no increase in G.V.W.
▽—With Spl 703A with 3 forward speeds.
‡—Front only: Rear 6.50/20S.
▲—7.50/20 can be used on the front with no change in 15000 G.V.W.
::—Own Loadmaster engine available on models QJ-QK-QL at extra cost.
§—Rear only: front 7.50/20.
△—Front only: Rear 7.00/16S.
■—Sleeper cab models available in 25-27-28 Series with 25 inch longer wheelbase.
‡—1|Front 1.375x1.312; 3 Center 1.375x.870; 1 Rear 1.500x1.499.
♦♦—Diameter: Front, 2.6870; Front Center, 2.7180; Rear Center, 2.7490; Rear, 2.7800; Total length, 5⅞.
●—Includes cab.
▽—Includes weight of spare tire which is not included for all other models.
♦—Front only: Rear 7.50/20D.

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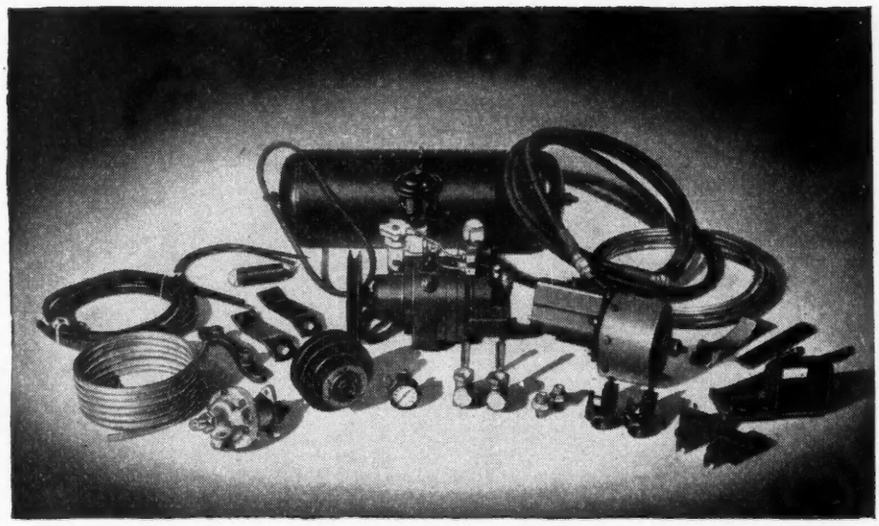

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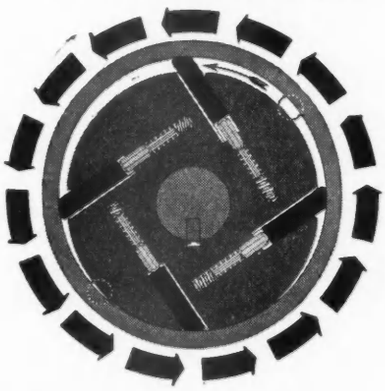

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The System With The Rotary Compressor

K 48-4

(Continued from Page 92)

Line Number	MAKE AND MODEL	Chassis List Price	WHEELBASE Minimum Standard	WHEELBASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear Standard Front and Rear	TIRE SIZES Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings Number, Diameter and Length	Governor Standard	TRANSMISSION Make and Model	TRANSMISSION Forward Sp'ds	REAR AXLE Make and Model	REAR AXLE Gear and Type	REAR AXLE Drive & Torque	REAR AXLE Gear Ratio Range in High	FRONT AXLE Make and Model	BRAKES SERVICE Make Location Type Operat'n	BRAKES SERVICE Lining Area	BRAKES SERVICE Drum Area	BRAKES SERVICE Drum Material	BRAKES Hand Location Type	C-A Dimension (Min. Std. W. B.)	FRAME Side Rail Dimensions	FRAME Type
	Dodge Cont'd																														
1	.....B-1-TA		130	190	21000		8.25/20△	10.00/20	Own T-158	6–3¾x5	331	6.5	270	128–3000	7–3x11.2	Y	NP-38110	5	Tim L-300	HyF	H	6.3–9.1	Tim 32516A1	O4IHV	424	666	C	TX	60	½x3x10	C
2	.....B-1-V		130	190	23000		10.00/20†	11.00/20	Own T-158	6–3¾x5	331	6.5	270	128–3000	7–3x11.2	Y	NP-38110	5	Tim Q-100	HyF	H	6.8–8.5	Tim 35020-NX9	O4IHV	485	770	C	TX	60	¼x3x10	C
3	.....B-1-VA		130	190	23000		10.00/20	11.00/20	Own T-158	6–3¾x5	331	6.5	270	128–3000	7–3x11.2	Y	NP-38110	5	Tim Q-300	HyF	H	6.5–9.5	Tim 35020-NX9	O4IHV	485	770	C	TX	60	¼x3x10	C
	School Buses																														
4	Dodge..B-1-FS-152		152	192	11750		6.50/20D	7.00/20	Own T-148	6–3 7/16 4x1½	236	6.6	192	109–3600	4–2¼x5.054	N	NP-39670	4	Own T-148	HyF	H	5.6–6.8	Own T-148	O4IH	336	479	Ce	TX	.....	21x2¾x7	C
5	.....B-1-JS-212		212	212	17000		7.50/20D	8.25/20	Own T-150	6–3 7/16 x4½	250	6.6	204	114–3600	4–2¼x5.054	Y	NP-38910	5	Own T-150	HyF	H	6.2–7.1	Own T-150	O4IHV	396	553	C	TX	.....	⅞x2⅞x8⅝	C
6	.....B-1-RS-229		229	229	19000		8.25/20D	9.00/20	Own T-156	6–3¾x4¼	281	6.4	225	115–3200	7–3x11.2	Y	NP-38100	5	TimH100DPH	HyF	H	6.8–8.1	Own T-156	O4IHV	396	609	C	TX	.....	⅞x2⅜x9⅛	C
7																															
8	Duplex.....T		136	220	18000	6600	8.25/20	9.00/20	Her JXD	6–4x4¼	320	6.2	240	113–3000	7–2½x10‖	Y	Fu 5B330	5	Tim H100	B	H	** –7.20	Tim 32502	L4IHV	420	654	A	TX	59	9⅛x3½x⅞	C
	Duplex..TH-404		136	154	18000	6900	8.25/20	9.00/20	Her WXLC3	6–4¼x4¾	404	5.8	312	139–2600	7–2½x10‖	Y	FU-5A430	5	Tim H-300	DF	H	6.13–8.15	Tim 32502	L41HV	420	654	A	TX	59	9⅛x3½x⅞	C
9	.....R		136	220	25000	8820	9.00/20	10.00/20	Her WXLC-3	6–4¼x4¾	404	5.8	312	139–2600	7–2⅝x13¼	Y	Fu 5A43	5	Tim Q300	DF	R	6.53–8.53	Tim 35000	L4IHV	730	1016	A	TX	79¼	9¼x3½x⅞	C
10	.....JHA		148	220	28000	9800	10.00/20D	11.00/20	Her RXB	6–4½x5¼	501	5.4	360	121–2200	7–3x14	Y	Fu 5A620	5	Tim S200	2F	R	** –9.83	Tim 26450	Ws41A	912	1311	A	TX	79	10⅛x3⅛x⅞	C
11	.....JH-558		148	220	28000	9800	10.00/20	11.00/20	Her RXLD	6–4¼x5¼	558	6.3	430	154–2400	7–3½x13¼	Y	FU-5A650	5	Tim S-300	DF	R	6.53–8.53	Tim 26450	Ws41A	912	1311	A	TX	79	10⅛x3⅛x⅞	C
12	.....KHA		148	220	32000	10500	11.00/20	11.00/20	Her RXC	6–4⅝x5¼	529	5.4	395	132–2300	7–3x14¼	Y	Fu 5A620	5	Tim U-200	2F	R	** –9.83	Tim 26450	Ws41A	912	1311	A	TX	79	10⅛x3⅛x⅞	C
13	L		148	220	36000	11100	11.00/20	11.00/20	Her RXLD	6–4¼x5¼	558	5.4	425	154–2400	7–3½x13¼	Y	Fu 5C650	5	Tim U-200	2F	R	** –9.83	Tim 26450	Ws41A	912	1311	A	TX	79	10⅛x3⅛x⅞	C
14	Federal.....16M		139	194	13500	4460	7.50/20D	7.50/20	Her JXEF	6–3½x4¼	245	6.5	184	89–3000	7–2½x10‖	N	WG T9	4	T 53547DPH	BF	H	** –5.66	Tim 30000HX	L4IHV	310	482	a	TX	60	8⅛x2⅞x¾	T
15	.....16M2		146	194	13500	4590	7.50/20D	8.25/20D	Her JXEF	6–3½x4¼	245	6.5	184	89–3000	7–2½x10‖	N	WG T9	4	Tim E300DPH	dF	H	6.13–8.10	Tim 30000HX	L41HV	310	482	a	TX	60	8⅛x2⅞x¾	T
16	.....18M		139	194	15000	4700	8.25/20D	8.25/20	Her JXBF	6–3⅝x4¼	263	6.5	190	96–3000	7–2½x10‖	N	WG T9	4	Tim E100DPH	SF	H	** –6.20	Tim 30003H	LT4IHV	314	532	a	TX	60	8⅛x2⅞x¾	T
17	.....18M2		139	194	15000	4830	8.25/20D	8.25/20	Her JXBF	6–3⅝x4¼	263	6.5	190	96–3000	7–2½x10‖	N	WG T9	8	Tim E300DPH	dF	H	6.13–8.10	Tim 30003H	LT4IHV	314	532	a	TX	60	8⅛x2⅞x¾	T
18	.....25M		139	194	17500	4950	8.25/20D	9.00/20	Her JXCF	6–3¾x4¼	282	6.5	212	102–3000	7–2½x10	N	Cla 205VO	5	TimH100DPH	SF	H	** –6.80	Tim 3100H	LT4IHV	346	583	a	TX	60	8⅛x2⅞x¾	T
19	.....25M2		139	194	17500	5100	8.25/20D	9.00/20	Her JXCF	6–3¾x4¼	282	6.5	212	102–3000	7–2½x10	N	Cla 205VO	5	TimH300DPH	dF	H	6.13–8.15	Tim 3100H	LT4IHV	346	583	a	TX	60	8⅛x2⅞x¾	T
20	.....29M		139	194	20000	5500	9.00/20D	10.00/20	Her JXDF	6–4x4¼	320	6.5	246	112–2800	7–2½x10‖	Y	Cla 205V	5	Tim L100DPH	SF	H	** –6.83	Tim 32514H	LT4IHV	466	820	a	TX	60	8⅛x2⅞x½	T
21	.....29M2		139	194	20000	5690	9.00/20D	10.00/20	Her JXDF	6–4x4½	320	6.5	246	112–2800	7–2½x10‖	Y	Cla 205V	10	Tim L300DPH	dF	H	6.32–8.22	Tim 32514H	LT4IHV	466	820	a	TX	60	8⅛x2⅞x½	T
22	.....29MA		155	194	20000	5950	9.00/20D	10.00/20	Her JXDF	6–4x4¼	320	6.5	246	112–2800	7–2½x10‖	Y	Cla 205V♦	15	Tim L100DPH	SF	H	** –6.83	Tim 32514H	LT4IHV	466	820	a	TD	76	8⅛x2⅞x½	T
23	.....29ML		139	194	20000	5535	9.00/20D	10.00/20	Here JXLDF	6–4x4½	339	6.5	250	126–2800	7–2½x10‖	Y	Cla 205V	5	Tim L100DPH	SF	H	** –6.83	Tim 32514H	LT4IHV	466	820	a	TX	60	8⅛x2⅞x¾	‡T
24	.....29ML2		139	194	20000	5725	9.00/20D	10.00/20	Here JXLDF	6–4x4½	339	6.5	250	126–2800	7–2½x10‖	Y	Cla 205V	10	Tim L300DPH	dF	H	6.32–8.22	Tim 32514H	LT4IHV	466	820	a	TX	60	8⅛x2⅞x¾	‡T
25	.....29MLA		155	194	20000	5985	9.00/20D	10.00/20	Here JXLDF	6–4x4½	339	6.5	250	126–2800	7–2½x10‖	Y	Cla 205V	15	Tim L100DPH	SF	H	** –6.83	Tim 32514H	LT4IHV	466	820	a	TD	76	8⅛x2⅞x¾	‡T
26	.....35M		143	203	21000	6925	9.00/20D	10.00/20	Con T6371	6–4½x4⅜	371	6.6	290	133–2600	7–2⅞x13½	Y	Cla 270VO	5	Tim L100DPH	SF	R	**–6.83	Tim 32514H	LT4IHV	466	820	a	TX	60½	10½x3⅛x⅞	● T
27	.....35M2		143	203	21000	7115	9.00/20D	10.00/20	Con T6371	6–4½x4⅜	371	6.6	290	133–2600	7–2⅞x13½	Y	Cla 270VO	10	Tim L300DPH	dF	R	6.32–8.22	Tim 32514H	LT4IHV	466	820	a	TX	60½	10½x3⅛x⅞	● T
28	.....45M		143	203	24000	8005	10.00/22D	10.00/24	Con T6427	6–4⅞x4⅞	427	6.4	272	155–2600	7–2¾x13½	Y	Cla 270VO	5	Tim Q100P	SF	R	**–6.83	Tim 35011TW	TW4IA	606	933	a	TD	60½	10½x3⅛x⅞	● T
29	.....45M2		143	203	24000	8380	10.00/22D	10.00/24	Con T6427	6–4⅞x4⅞	427	6.4	272	155–2600	7–2¾x13½	Y	Cla 270VO	10	Tim Q300P	dF	R	6.53–8.53	Tim 35011TW	TW4IA	606	933	a	TD	60½	10½x3⅛x⅞	● T
30	.....55M2		143	203	27000	8635	11.00/22D	11.00/24	Con T6427	6–4⅞x4⅞	427	6.4	272	155–2600	7–2¾x13½	Y	Cla 270VO	10	Tim S300P	HyF	R	6.53–8.53	Tim 36021TW	Tw4IA	722	1051	a	TD	60½	10¼x3⅛x⅞	● T
31	.....55MA		155	203	27000	8765	11.00/22D	11.00/24	Con T6427	6–4⅞x4⅞	427	6.4	272	155–2600	7–2¾x13½	Y	Cla 270V♦	15	Tim S-200P	2F	R	** –7.08	Tim 36021TW	TW4IA	722	1051	a	TD	72½	10¼x3⅛x⅞	● T
32	.....60MA		155	203	28000	9600	11.00/22D	11.00/24	Con 22R	6–4½x5¼	501	5.4	384	148–2400	7–2¾x14½	Y	Fu 5A65‖	15	Tim S200P	2F	R	** –7.08	Tim 36021TW	Tw4IA	722	1051	a	FX	72½	10¼x3⅛x⅞	● T
33	.....60M2		143	203	28000	9370	11.00/22D	11.00/24	Con 22R	6–4½x5¼	501	5.4	384	148–2400	7–2¾x14½	Y	Fu 5A650	10	Tim S300P	HyF	R	6.53–8.53	Tim 36021TW	Tw4IA	722	1051	a	TX	60½	10¼x3⅛x⅞	T
34	.....65M2		141	201	30000	9995	11.00/22D	11.00/24	Con R6602	6–4⅞x5⅝	602	6.1	464	200–2600	7–3¼x14½	Y	Fu 5A650	10	Tim S300P	HyF	R	6.53–8.53	Tim 36000TW	Ws41A	722	1051	a	TX	60½	10¼x3⅛x⅞	T
35	.....65MA		153	201	30000	10225	11.00/22D	11.00/24	Con R6602	6–4⅞x5⅝	602	6.1	464	200–2600	7–3¼x14½	Y	Fu 5A65‖	15	Tim S200P	HyF	R	** –7.08	Tim 36000TW	Ws41A	722	1051	a	TX	72½	10¼x3⅛x⅞	● T
	Ford F-1																														
36	Cowl...8HC-84	890	114	114	4700	2400	6.00/16-4	6.50/16-6S	Own 7HC	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 21C	3	Own 8C	H½	H	3.73–4.27	Own 8RC	O4IH	178	259	Co	M2	40.06	5.92x2¼x15	T
37	Cowl...8RC-84	910	114	114	4700	2400	6.00/16-4	6.50/16-6S	Own 8RC	8–3 7/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 21C	3	Own 8C	H½	H	3.73–4.27	Own 8RC	O4IH	178	259	Co	M2	40.06	5.92x2¼x15	T
	F-2																														
38	Cowl....8HD-84	995	122	122	5700	2765	6.50/16-6	7.00/16-6S	Own 7HY	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 51Y	4	Own 8RD	S	H	** –4.68	Own 8RD	O4IH	167	264	Co	M2	48.06	6x2¼x.19	T
39	Cowl....8RD-84	1015	122	122	5700	2765	6.50/16-6	7.00/16-6S	Own 8RY	8–3 7/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 51Y	4	Own 8RD	S	H	** –4.68	Own 8RD	O4IH	167	264	Co	M2	48.06	6x2¼x.19	T
	F-3																														
40	Cowl....8HY-84	1059	122	122	6800	3015	7.00/17-6S	7.50/17-8S	Own 7HY	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 51Y	4	Own 8RY	S	H	** –4.68	Own 8RY	O4IH	188	308	Co	M2	48.06	6x2¼x.19	T
41	Cowl....8RY-84	1079	122	122	6800	3015	7.00/17-6S	7.50/17-8S	Own 8RY	8–3 7/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 51Y	4	Own 8RY	S	H	** –4.68	Own 8RY	O4IH	188	308	Co	M2	48.06	6x2¼x.19	T
	F-4																														
42	Cowl...8HTL-84	1108	134	134	10000	3731	7.00/20-8S	7.00/18-8	Own 7HT	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 41T	4	Own 7RTL	S	H	5.14–5.83	Own 7RTL	O4IH	302	506	Co	TX	60.06	7x2¾x.21	T
43	Cowl...8RTL-84	1128	134	134	10000	3731	7.00/20-8S	7.00/18-8	Own 8RT	8–3 7/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 41T	4	Own 7RTL	S	H	5.14–5.83	Own 7RTL	O4IH	302	506	Co	TX	60.06	7x2¾x.21	T
	F-5																														
44	Cowl....8HT-84	1122	134	134	14000	3935	6.50/20-6	7.50/20-8	Own 7HT	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 41T	4	Own 7RT	S	H	5.14–6.67	Own 7RT	O4IH	302	506	Co	TX	60.06	7x2¾x.21	L
45	Cowl....8RT-84	1142	134	134	14000	3935	6.50/20-6	7.50/20-8	Own 8RT	8–3 7/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 41T	4	Own 7RT	S	H	5.14–6.67	Own 7RT	O4IH	302	506	Co	TX	60.06	7x2¾x.21	L
46	Cowl...8H8T-84	1152	158	158	14000	4095	6.50/20-6	7.50/20-8	Own 7HT	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 41T	4	Own 7RT	S	H	5.14–6.67	Own 7RT	O4IH	302	506	Co	TX	84.06	7x2¾x.21*	LT
47	Cowl...8R8T-84	1172	158	158	14000	4095	6.50/20-6	7.50/20-8	Own 8RT	8–3 7/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 41T	4	Own 7RT	S	H	5.14–6.67	Own 7RT	O4IH	302	506	Co	TX	84.06	7–2¾x.21*	LT
	F-5 C.O.E.																														
48	Cab...8HOW-81	1467	110	110	14000	4615	6.50/20-6	7.50/20-8	Own 7HW	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 41T	4	Own 7RT	SF	H	5.14–6.67	Own 7RW	O4IH	302	506	Co	TX	60.06	7x2¾x.21*	LT
49	Cab...8ROW-81	1487	110	110	14000	4615	6.50/20-6	7.50/20-8	Own 8RW	8–3 7/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 41T	4	Own 7RT	SF	H	5.14–6.67	Own 7RW	O4IH	302	506	Co	TX	60.06	7x2¾x.21*	LT
50	Cab....8HW-81	1497	134	134	14000	4753	6.50/20-6	7.50/20-8	Own 7HW	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 41T	4	Own 7RT	SF	H	5.14–6.67	Own 7RW	O4IH	302	506	Co	TX	84.06	7.08x2.8x¼*	LT
51	Cab....8RW-81	1517	134	134	14000	4753	6.50/20-6	7.50/20-8	Own 8RW	8–3 7/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 41T	4	Own 7RT	SF	H	5.14–6.67	Own 7RW	O4IH	302	506	Co	TX	84.06	7.08x2.8x¼*	LT
52	Cab...8H8W-81	1527	158	158	14000	4835	6.50/20-6	7.50/20-8	Own 7HW	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 41T	4	Own 7RT	SF	H	5.14–6.67	Own 7RW	O4IH	302	506	Co	TX	108.1	7.08x2.8x¼*	LT
53	Cab...8R8W-81	1547	158	158	14000	4835	6.50/20-6	7.50/20-8	Own 8RW	8–3 7/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 41T	4	Own 7RT	SF	H	5.14–6.67	Own 7RW	O4IH	302	506	Co	TX	108.1	7.08x2.8x¼*	LT
	F-5 School Bus																														
54	Bus Cl..8H8T-84	1240	158	158	12000	4143	6.50/20-6	7.00/20-8	Own 7HT	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 41T	4	Own 7RT	S	H	5.14–6.67	Own 7RT	O4IH	302	506	Co	TX	128♦	7x2¾x.21*	LT
55	Bus Cl..8R8T-84	1260	158	158	12000	4143	6.50/20-6	7.00/20-8	Own 8RT	8–3 7/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 41T	4	Own 7RT	S	H	5.14–6.67	Own 7RT	O4IH	302	506	Co	TX	128♦	7x2¾x.21*	LT
56	Bus Cl..8H4T-84	1455	194	194	15000	4450	7.50/20-8	8.25/20-10	Own 7HT	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 41T	4	Own 7RTH	SF	H	5.14–6.67	Own 7RTH	O4IH	302	506	Co	TX	164♦	7.08x2.8x¼*	LT
57	Bus Cl..8R4T-84	1475	194	194	15000	4450	7.50/20-8	8.25/20-10	Own 8RT	8–3 7/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 41T	4	Own 7RT	S	H	5.14–5.67	Own 7RTH	O4IH	302	506	Co	TX	164♦	7.08x2.8x¼*	LT
	F-6																														
58	Cowl..8HTH-84	1530	134	134	15500	4233	7.50/20-8	8.25/20-10	Own 7HT	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 41T	4	Own 7RTM■	SF	H	5.83–8.11	Own 7RTH	O4IHV	302	506	Co	TX	60.06	7.08x2.8x¼*	LT
59	Cowl..8RTH-84	1550	134	134	15500	4233	7.50/20-8	8.25/20-10	Own 8RT	8–3 7/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 41T	4	Own 7RTM■	SF	H	5.83–8.11	Own 7RTH	O4IHV	302	506	Co	TX	60.06	7.08x2.8x¼*	LT
60	Cowl.8H8TH-84	1560	158	158	15500	4327	7.50/20-8	8.25/20-10	Own 7HT	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 41T	4	Own 7RTM■	SF	H	5.82–8.11	Own 7RTH	O4IHV	302	506	Co	TX	84.06	7.08x2.8x¼*	LT
61	Cowl.8R8TH-84	1580	158	158	15500	4327	7.50/20-8	8.25/20-10	Own 8RT	8–3 7/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 41T	4	Own 7RTM■	SF	H	5.83–8.11	Own 7RTH	O4IHV	302	506	Co	TX	84.06	7.08x2.8x¼*	LT
	F-6 C.O.E.																														
62	Cab.8HOWH-81	1875	110	110	16000	4771	7.50/20-8	8.25/20-10	Own 7HW	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 41T	4	Own 7RTM■	SF	H	5.83–8.11	Own 7RW	O4IHV	302	506	Co	TX	60.06	7x2¾x.21*	LT
63	Cab.8ROWH-81	1895	110	110	16000	4771	7.50/20-8	8.25/20-10	Own 8RW	8–3 7/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 41T	4	Own 7RTM■	SF	H	5.83–8.11	Own 7RW	O4IHV	302	506	Co	TX	60.06	7x2¾x.21*	LT
64	Cab...8HWH-81	1905	134	134	16000	4931	7.50/20-8	8.25/20-10	Own 7HW	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 41T	4	Own 7RTM■	SF	H	5.83–8.11	Own 7RW	O4IHV	302	506	Co	TX	84.06	7.08x2.8x¼*	LT
65	Cab...8RWH-81	1925	134	134	16000	4931	7.50/20-8	8.25/20-10	Own 8RW	8–3 7/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 41T	4	Own 7RTM■	SF	H	5.83x8.11	Own 7RW	O4IHV	302	506	Co	TX	84.06	7.08x2.8x¼*	LT
66	Cab..8H8WH-81	1935	158	158	16000	5025	7.50/20-8	8.25/20-10	Own 7HW	6–3.3x4.4	226	6.8	180	95–3300	4–2.87x4.8	N	Own 41T	4	Own 7RTM■	SF	H	5.83–8.11	Own 7RW	O4IHV	302	506	Co	TX	108.1	7.08x2.8x¼*	LT
67	Cab..8R8WH-81	1955	158	158	16000	5025	7.50/20-8	8.25/20-10	Own 8RW	8–3 7/16 x3¾	239	6.8	180	100–3800	3–2.49x4.9	N	Own 41T	4	Own 7RTM■	SF	H	5.83x8.11	Own 7RW	O4IHV	302	506	Co	TX	108.1	7.08x2.8x¼*	LT

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†—Rear only; Front 9.00/20.
▽—Rear only; Front 7.50/20.
‡—For shorter wheelbases 8½x2⅞x⅞.

△—Cowl to Axle.
‖—For shorter wheelbases—10x3½x¼.
♦—Auxiliary trans. Spicer 6231B, three forward speeds.
§—Auxiliary trans. Spicer 703F, three forward speeds.

■—Two speed rear axle with vacuum shift.
*—Reinforcement 6.58x2.21x.125. Inside Siderail from Front to Rear Spring Brackets.

"SO COOL RUNNING- REMINDS ME OF A MOUNTAIN STREAM"
"SHOULDERS LIKE A PLOW HORSE"
"...THAT'S BECAUSE THEY'RE MADE WITH A WEFTLESS RAYON CORD TYPE CONSTRUCTION"
"WISH I KNEW THE SECRET OF THE AGE RESISTORS USED IN HOOD TIRES"
"NEVER SAW SUCH A SURE-FOOTED TREAD"
TRUCK & BUS
HEAVY DUTY
HOOD
"THOSE NYLON SHOCK SHIELDS WARD OFF BLOWS LIKE A CHEST PROTECTOR"
"TAKE IT FROM ME, HOOD STANDS FOR LONG WEAR IN ANY TIRE · · PASSENGER OR TRUCK"

Hood Rubber Company, a Division of The B. F. Goodrich Company, Akron, Ohio and Los Angeles, Calif.

(Continued from Page 94)

Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE Minimum Standard	WHEEL-BASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear Standard Front and Rear	TIRE SIZES Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings Number, Diameter and Length	Governor Standard	TRANSMISSION Make and Model	TRANSMISSION Forward Sp'ds	REAR AXLE Make and Model	REAR AXLE Gear and Type	REAR AXLE Drive & Torque	REAR AXLE Gear Ratio Range in High	FRONT AXLE Make and Model	BRAKES SERVICE Make Location Type Operation	BRAKES SERVICE Lining Area	BRAKES SERVICE Drum Area	BRAKES SERVICE Drum Material	BRAKES Hand Location Type	G-A Dimensions (Min. Std. W. B.)	FRAME Side Rail Dimensions	FRAME Type
	Ford Cont'd																														
	F-7																														
1	Cowl....8EQ-84	2485	135	135	19000	5664	8.25/20-10	9.00/20-10	Own 8EQ	8–3½x4⅜	337	6.4	255	145–3600	3–2.87x5.0	Y	Own 7EQ	5	Own 7EQ	Hy	H	6.8	Own 7EQ	O41HV	350	583	Co	TX	61.06	9x3x.25	T
2	Cowl....8E9Q-84	2515	159	159	19000	5784	8.25/10-20	9.00–20-10	Own 8EQ	8–3½x4⅜	337	6.4	255	145–3600	3–2.87x5.0	Y	Own 7EQ	5	Own 7EQ	Hy	H	6.8	Own 7EQ	O41HV	350	583	Co	TX	85.06	9x3x.25	T
3	Cowl....8E5Q-84	2565	195	195	19000	5914	8.25-20-10	9.00/20-10	Own 8EQ	8–3½x4⅜	337	6.4	255	145–3600	3–2.87x5.0	Y	Own 7EQ	5	Own 7EQ	Hy	H	6.8	Own 7EQ	O41HV	350	583	Co	TX	121.1	9x3x.25	T
	F-8																														
4	Cowl...8EQH-84	3165	135	135	21500	6393	9.00/20-10	10.0/20-12	Own 8EQ	8–3½x4⅜	337	6.4	255	145–3600	3–2.87x5.0	Y	Own 7EQH♦	5	Own 7EQH♦	SF	H	6.5 –8.87	Own 7EQ	O41HV	485	729	C	TX	61.06	9x3x.25	T
5	Cowl..8E9QH-84	3195	159	159	21500	6543	9.00/20-10	10.0/20-12	Own 8EQ	8–3½x4⅜	337	6.4	255	145–3600	3–2.87x5.0	Y	Own 7EQH♦	5	Own 7EQH♦	SF	H	6.5 –8.87	Own 7EQ	O41HV	485	729	C	TX	85.06	9x3x.25	T
6	Cowl..8E5QH-84	3245	195	195	21500	6693	9.00/20-10	10.0/20-12	Own 8EQ	8–3½x4⅜	337	6.4	255	145–3600	3–2.87x5.0	Y	Own 7EQH♦	5	Own 7EQH♦	SF	H	6.5 –8.87	Own 7EQ	O41HV	485	729	C	TX	121.1	9x3x.25	T
7	Hudson (¾T. Pkp)	128	128	4810		6.50/16-6	6.50/16-6	Own 178	6–3x5	212	6.5	168	102–4000	3– ▲▲	N	Own	3	Own	S½	H	** –4.55	Own	B4IH	141	242	C	2I	42½	7⅝x1¾x⅛	B
8	Intern'l (2)...KB-1	815	113	125	4400	2250	6.00/16-4	7.00/16	Own GRD214	6–3⅛x4½	213	6.3	160	82–3400	4–2⅝x6‡‡	N	Own HDS-B	3	Own R1050	S½	H	3.72–5.11	Own F50	L41H	164	316	e	FX	38	6x2¼x⅛	T
9	.....KB-1M	770	102	113	4600	2150	6.00/16-4	6.50/16-6	Own GRD214	6–3⅛x4½	213	6.3	160	82–3400	4–2⅝x6‡‡	N	O SA-HDS-B	3	Own R1050	S½	H	3.72–5.11	Own F150	L41H	164	316	e	FX	....	6½x2¼x⅛‡‡	T
10	.....KB-2	855	125	125	5200	2285	6.00/16-4	7.00/16-6	Own GRD214	6–3⅛x4½	213	6.3	160	82–3400	4–2⅝x6‡‡	N	Own HDS-B	3	Own R1050	S½	H	3.72–5.11	Own F50	L41H	164	316	e	FX	50	6⅛x2¼x⅛	T
11	.....KB-3	1005	130	....	6650	3000	7.00/16-6	7.50/16-6	Own GRD214	6–3⅛x4⅜	213	6.3	160	82–3400	4–2⅝x6‡‡	N	Own HDS-B	3	Own R1150	SF	H	4.22–5.28	Own F150	L41H	195	367	e	FX	55	6½x2⅛x⅛‡‡	T
12	.....KB-3M	930	102	113	7000	2585	7.00/16-6	7.50/16-8	Own GRD214	6–3⅛x4⅜	213	6.3	160	82–3400	4–2⅝x6‡‡	N	Own H41B	4	Own R1150	SF	H	4.22–5.28	Own F150	L41H	221	367	e	FX	....	6½x2¼x⅛‡‡	T
13	(a).....KB-5	1145	135	177	13500	3705	6.50/20D	8.25/20	O-GRD 233	6–3⅛x4½	233	6.3	181	93–3400	4–2⅝x6‡‡	N	Own H41B	4	Own R1360	SF	H	5.28–7.16	Own F350	L41HH	294	509	e	FX	60	8¾x⅛	T
14	(a).....KB-6	1625	134	176	14500	4625	7.00/20D	8.25/20	Own BLD250	6–3⅛x4½	251	6.3	200	100–3200	4–2⅝x5‡‡	N	Own WT97A	5	Own R1560	SF	H	6.50–7.16	Own F470	LH4IHV	368	633	e	FX	60	8¼x8x⅛	T
15	(a).....KB-7	2100	134	176	16500	5055	7.50/20D	9.00/20	O-BLD 269	6–3⅛x4½	269	6.3	222	100–3000	4–2.75‡‡	N	Own F51	5	Own R1560	SF	H	6.50–7.16	Own F470	LH4IHV	368	633	e	FX	60	8¼x8x⅛	T
16	(a).....KB-8	3050	137	197	20000	6580	9.00/20D	10.00/24	O-RED 361	6–4¼x4½	361	6.3	282	126–3000	7–3¼x10‡‡	Y	Own F51	5	Own R1572	SF	H	6.43–8.51	Own F553	LH4IHV	407	709	e	FX	60	8‡‡x8¼x⅛	T
17	(a).....KB-10	3900	149	197	22500	7405	10.00/20D	11.00/24	Own RED401	6–4½x5	401	6.3	318	140–2800	7–3¼x10‡‡	Y	Own F52	5	Own R1676	SF	H	6.43–8 05	Own F653	LH4IHV	484	829	e	FX	72	9¼x8x⅛	T
18	(a).....KB-11	5300	149	197	27000	8430	10.00/20D	12.00/24	O-RED 450	6–4⅝x5	450	6.3	361	148–2600	7–3¼x10‡‡	Y	Own F54	5	Tim R100	2SF	H	6.42–8 05	Own F750	WW4IA	746	1030	G	FX	72	10x3½x⅛	T
19	.....KB-12	6550	155	215	28500	9175	11.00/20	12.00/20	O-Con. R6586	6–4¼x5⅜	586	6.0	475	200–2600	7–3¼x13⅜	Y	Own F55	5	Tim R100	2F	H	** –6.42	Own F750	BW4IA	746	....	GS	FX	66	10x3½x⅛	C
20	(a).....KBR-14	7150	161	215	32000	10100	11.00/20	12.00/24	O-Con. R6586	6–4¼x5⅜	586	6.0	475	200–2600	7–3¼x13⅜	Y	Own F55B	5	Tim U200P	2F	H	**–7.08	Own F750	BW4IA	746	....	GS	FX	72	10x3½x⅛	L
21	.....W-3042-L	9500	179	227	30000	12530	10.00/20	11.00/22	Cum HB600	6–5⅝x5½	672	17	554	254–2600	7–3¾x15¾	Y	Spi 7741	4	Tim R-100	2F	H	** –6.42	Own S6303	BW4IA	690	....	G	FX	84	10x3½x⅛	C
22	.....W-4042-OH	.....	170	230	40000	13115	10.00/20	14.00/24	Cum HB600	6–4⅞x6	672	17	492	150–1800	7–4½x..	Y	Spi 7741	4	Tim 7.69–11.36	Own 82F	BW4IA	656	....	G	FX	72	10x3½x⅛	C
23	Kenworth(D)..521	.....	161	215	35000	12200	10 00/20	11.00/22	Cum HB6	6–4⅞x6	672	17.	500	150–1800	7–4½x16½	Y	BL 7841	4	Tim U200P	DR	H	6.42–7.84	Tim 36000TW	Ws4IA	752	1050	a	TD	72	9¼x3¼x⅛	C
24	585	.....	150	215	30000	10130	10.00/20	11.00/22	Bu LO525	6–4½x5½	525	5.5	385	150–2200	7–3x11½	Y	Fu 5A620	5	Tim 58415P	....	.	6.14	Tim 36000TW	Ws4IA	752	....	a	....	70	9¼x3¼x⅛	....
25	Mar. Her...DVL-4	.....	90	118	‡6750	.....	7.50/168	8.25/188	Willys MB	4–3⅛x4⅝	134	6.4	105	60–4000	3–2.33x5.48	Y	Own	3	(Front Drive)	.....	.	7.10	Own	41H	202	327	M2	.....	.....	None	....
26																															
27	Reo.....C-19A	.....	125	125	14000	4810▲	7.50/20	8.25/20	Own GC 245	6–3½x4¼	245	6.2	192	89–3100	7–2⅝x10.7	Y	WG T97	4	T53547–E300	SFd	H	5.66–6.16*	Tim 30000	T4IVH▼	310	482	var	TX	60⅝	8‡‡x2‡‡x⅞	T
28	.....C-19T	.....	125	125	14000	5280▲	8.25/20	8.25/20	Own GC 245	6–3½x4¼	245	6.2	192	89–3100	7–2⅝x10.7	Y	WG T97	4	Tim E300	HFd	H	6.13&8.10	Tim 30000	T4IVH▼	210	482	var	TX	60⅝	8‡‡x2‡‡x⅞	T
	.....C-19B	.....	150	150	14000	4960▲	7.50/20	8.25/20	Own GC 245	6–3½x4¼	245	6.2	192	89–3100	7–2⅝x10.7	Y	WG T97	4	T53547–E300	SFd	H	5.66–6.16*	Tim 30000	T4IVH▼	310	482	var	TX	85⅝	8‡‡x2‡‡x⅞	T
29	.....C-19C	.....	165	165	14000	5030▲	7.50/20	8.25/20	Own GC 245	6–3½x4¼	245	6.2	192	89–3100	7–2⅝x10.7	Y	WG T97	4	T53547–E300	SFd	H	5.66–6.16*	Tim 30000	T4IVH▼	310	482	var	TX	100⅝	8‡‡x2‡‡x⅞	T
	.....C-21T	.....	130	130	18000	6380▲	9.00/20	9.00/20	Own GC 288	6–3½x5	288	6.2	225	96–3000	7–2⅝x10.7	Y	Cla 205V–VO	5	Tim H300	HFd	H	6.13&8.15	Tim 31107	T4IVH▼	344	584	var	TX	65⅝	9x3x¼	T
30	.....C-21A	.....	130	130	18000	6090▲	9.00/20	9.00/20	Own GC 288	6–3½x5	288	6.2	225	96–3000	7–2⅝x10.7	Y	Cla 205V	5	Tim H300	HFd	H	6.13&8.15	Tim 31107	T4IVH▼	344	584	var	TX	65⅝	9x3x¼	T
31	.....C-21B	.....	150	150	18000	6080▲	8.25/20	9.00/20	Own GC 288	6–3½x5	288	6.2	225	96–3000	7–2⅝x10.7	Y	Cla 205V–VO	5	Tim H100–300	HFd	H	6.16–6.8*	Tim 31107	T4IVH▼	344	584	var	TX	85⅝	9x3x¼	T
32	.....C-21C	.....	165	165	18000	6220▲	9.00/20	9.00/20	Own GC 288	6–3½x5	288	6.2	225	96–3000	7–2⅝x10.7	Y	Cla 205V–VO	5	Tim H100–300	HFd	H	6.16–6.8*	Tim 31107	T4IVH▼	344	584	var	TX	100⅝	9x3x¼	TF
33	.....C-22T	.....	130	130	20500	6630▲	9.00/20	9.00/20	Own GC 310	6–3⅝x5	310	6.2	243	101–3000	7–2⅝x10.7	Y	Cla 205V–VO	5	Tim H300	HFd	H	6.13&8.15	Tim 31107	T4IVH▼	344	584	var	TX	65⅝	9¼x3⅞x⅜x⅞	T
34	.....C-22A	.....	130	130	20500	6220▲	9.00/20	9.00/20	Own GC 310	6–3⅝x5	310	6.2	243	101–3000	7–2⅝x10.7	Y	Cla 205V	5	Tim H300	HFd	H	6.13&8.15	Tim 31107	T4IVH▼	344	584	var	TX	65⅝	9¼x3⅞x⅜x⅞	T
35	.....C-22B	.....	150	150	20500	6220▲	9.00/20	9.00/20	Own GC 310	6–3⅝x5	310	6.2	243	101–3000	7–2⅝x10.7	Y	Cla 205V–VO	5	Tim H Series	HFd	H	6.16–7.3*	Tim 31107	T4IVH▼	344	584	var	TX	85⅝	9¼x3⅞x⅜x⅞	TF
36	.....C-22C	.....	165	165	20500	6410▲	9.00/20	9.00/20	Own GC 310	6–3⅝x5	310	6.2	243	101–3000	7–2⅝x10.7	Y	Cla 205V–VO	5	Tim H100–300	HFd	H	6.16–6.8*	Tim 31107	T4IVH▼	344	584	var	TX	100⅝	9¼x3⅞x⅜x⅞	TF
37	.....C-22L	.....	185	185	20500	6490▲	9.00/20	9.00/20	Own GC 310	6–3⅝x5	310	6.2	243	101–3000	7–2⅝x10.7	Y	Cla 205V	5	Tim H100–300	HFd	H	6.16*	Tim 31107	T4IVH▼	344	584	var	TX	120⅝	9¼x3⅞x⅜x⅞	TF
38	.....C-23T	.....	130	130	23000	8100▲	10.00/20	10.00/20	Con T-6371	6–4⅜x4⅝	371	6.3	292	133–2800	7–2½x13.5	Y	Cla 270V–VO	5	Tim L-Series	HF	H	6.83*	Tim 32500	Ws4IA	514	784	Var	TX	65⅝	9¼x3⅞x⅜x⅞	T
39	.....C-23B	.....	150	150	23000	7380▲	10.00/20	10.00/20	Con T-6371	6–4⅜x4⅝	371	6.3	292	133–2800	7–2½x13.5	Y	Cla 270VO	5	Tim L-200	HF2	H	8.22	Tim 32500	T4IVH▼	370	644	Var	TX	85⅝	9¼x3⅞x⅜x⅞	T
40	.....C-23L	.....	185	185	23000	7500▲	10.00/20	10.00/20	Con T-6371	6–4⅜x4⅝	371	6.3	292	133–2800	7–2½x13.5	Y	Cla 270VO	5	Tim L-100-300	HF	H	6.83*	Tim 32500	Ws4IA	514	784	Var	TX	120⅝	9¼x3⅞x⅜x⅞	Tf
41	.....C-25T	.....	130	130	27400	8700▲	10.00/20	10.00/22	Con T-6427	6–4⅞x4⅞	427	6.2	336	153–2800	7–2½x13.5	Y	Cla 270V–VO	5	Tim Q300	HFd	H	6.53–8.53	Tim 35000	Ws4IA	586	848	Var	TX	65⅝	9¼x3⅞x⅜x⅞	T
42	.....C-25B	.....	150	150	27400	8570▲	10.00/20	10.00/20	Con T-6427	6–4⅞x4⅞	427	6.2	336	153–2800	7–2½x13.5	Y	Cla 270VO	5	Tim S200P	HF2	H	7.84	Tim 35000	Ws4IA	660	952	Var	TX	85⅝	9¼x3⅞x⅜x⅞	T
43	.....C-25BT	.....	150	150	27400	9360▲	10.00/20	10.00/20	Con T-6-27	6–4⅞x4⅞	427	6.2	336	153–2800	7–2½x13.5	Y	Cla 270VO&▼	15	Tim S200P	HF2	H	7.84	Tim 35000	Ws4IA	660	952	Var	TD	85⅝	9¼x3⅞x⅜x⅞	T
44	.....C-25BL	.....	150	150	27400	9310▲	10.00/20	10.00/20	Con T-6427	6–4⅞x4⅞	427	6.2	336	153–2800	7–2½x13.5	Y	Cla 270V&■	15	Tim S200P	HF2	H	7.84	Tim 35000	Ws4IA	660	952	Var	TD	85⅝	9¼x3⅞x⅜x⅞	T
45	.....C-25L	.....	185	185	27400	8700▲	10.00/20	10.00/20	Con T-6427	6–4⅞x4⅞	427	6.2	336	153–2800	7–2½x13.5	Y	Cla 270V	5	Tim S200P	HF2	H	7.84	Tim 35000	Ws4IA	660	952	Var	TX	120⅝	9¼x3⅞x⅜x⅞	Tf
46	.....30A	.....	145△	145	32000	12000▲	11.00/20	11.00/24	Con R6513	6–4½x5⅜	513	5.9	400	170–2600	7–3¼x14.5	Y	Spi 6252–53♦	5	TS300–U200	HF2	H	7.84*	Tim 36000	Ws4IA	722	1052	var	TI	67	10¼x3⅞x⅜x⅞	T
47	.....30B	.....	165△	165	32000	12750▲	11.00/20	11.00/24	Con R6513	6–4½x5⅜	513	5.9	400	170–2600	7–3¼x14.5	Y	Spi 6252–53♦	5	TS300–U200	HF2	H	–7.84*	Tim 36000	Ws4IA	722	1052	var	TI	87	10¼x3⅞x⅜x⅞	T
48	.....31A	.....	145△	145	32000	12000▲	11.00/20	11.00/24	Con R6602	6–4⅞x5⅜	602	5.9	464	200–2600	7–3¼x14.5	Y	Spi 6252–53♦	5	TS300–U200	HF2	H	–7.84*	Tim 36000	Ws4IA	722	1052	var	TI	67	10¼x3⅞x⅜x⅞	T
49	.....31B	.....	165△	165	32000	12750▲	11.00/20	11.00/24	Con R6602	6–4⅞x5⅜	602	5.9	464	200–2600	7–3¼x14.5	Y	Spi 6252–53♦	5	TS300–U200	HF2	H	–7.84*	Tim 36000	Ws4IA	722	1052	var	TI	87	10¼x3⅞x⅜x⅞	T
50																															
51	School Buses																														
52	.....C119-31	.....	152	152		.....	7.00/20	7.00/20	Own GC 245	6–3½x4	245	6.2	192	89–3100	7–2½x10.7	Y	Cla 185F	4	Tim 53547	SF	H	6.16	Tim 30000	T41VH▼	310	482	var	TX	.....	9x3x¼	T
53	.....C119L-43	.....	188	188		.....	7.50/20	7.50/20	Own GC 245	6–3½x4¼	245	6.2	192	89–3100	7–2½x10.7	Y	Cla 185F	4	Tim 53547	SF	H	6.67	Tim 31013	T41VH▼	310	482	var	TX	.....	9x3x¼	T
54	.....C119LS-49	.....	206	206		.....	7.50/20	7.50/20	Own GC 245	6–3½x4¼	245	6.2	192	89–3100	7–2½x10.7	Y	WG T97	4	Tim 53547	SF	H	6.67	Tim 31013	T41VH▼	310	482	var	TX	.....	9¼x3⅞x⅜x⅞	T
	.....C121-49	.....	206	206		.....	8.25/20	8.25/20	Own GC 288	6–3½x5	288	6.2	225	96–3000	7–2⅝x10.7	Y	Cla 231F	4	Tim E100	HyF	H	6.80	Tim 31104	T41VH▼	314	532	var	TX	.....	9¼x3⅞x⅜x⅞	T
55	.....C121S-55	.....	224	206		.....	8.25/20	8.25/20	Own GC 288	6–3½x5	288	6.2	225	96–3000	7–2⅝x10.7	Y	WG T97	4	Tim E100	HyF	H	6.80	Tim 31104	T41VH▼	314	532	var	TX	.....	9¼x3⅞x⅜x⅞	T
56	.....C122-55	.....	224	206		.....	9.00/20	9.00/20	Own GC 310	6–3⅝x5	310	6.2	243	101–3000	7–2⅝x10.7	Y	Cla 231F	4	Tim H100	HyF	H	7.20	Tim 31107	T41VH▼	344	584	var	TX	.....	9⅛x3⅞x⅜x⅞	T
57																															
58	Sterling....HD97	.....	148	175	24000	9150	9.00/20	11.00/20	Wau 6MZA	6–4¼x4¾	404	5.6	290	130–3000	7–2⅝x12½	Y	Fu 5A43	5	Tim Q100DPH	FHy	R	5.29–7.80	Tim 35011H	T4IHV	466	822	A	TX	67	9x7x¼	A
59	.....HD105	.....	148	175	24000	9550	10.00/20	11.00/22	Wau 6MZA	6–4¼x4¾	404	5.6	290	130–3000	7–2⅝x12½	Y	Fu 5A43	5	Tim R100DPH	FHy	R	5.29–7.40	Tim 35011H	T4IHV	524	926	A	TX	67	9x3¼x¼	A
60	.....HD115	.....	148	175	32000	10650	10.00/20	11.00/24	Wau 68RKR	6–4⅝x5½	517	5.5	368	125–2250	7–3x13¾	Y	Fu 5A62	2F	Tim S200P	2F	R	7.77–8.53	Tim 36000TW	Ws4IA	722	1054	A	TX	67	9x3¼x¼	A
61	.....HD145	.....	148	175	36000	11250	11.00/20	12.00/24	Wau 68RKR	6–4⅝x5½	517	5.5	368	125–2250	7–3x13¾	Y	Fu 5A62	5	Tim 79721W	2F	R	7.69–11.36	Tim 36000TW	Ws4IA	614	922	A	TX	67	9¼x3⅝x⅜x⅞	A
62	(D)....HD115H	.....	158	185	32000	11950	10.00/20	11.00/24	Cum HB600	6–4⅞x6	672	17.	500	150–1800	7–4½x16½	Y	Fu 4B86	4	Tim S200P	2F	R	7.77–8.53	Tim 36000TW	Ws4IA	722	1054	A	TX	68	9x3¼x¼	A
63	(D)....HD145H	.....	158	185	36000	12550	11.00/20	12.00/24	Cum HB600	6–4⅞x6	672	17.	500	150–1800	7–4½x16½	Y	Fu 4B86	4	Tim 79721W	2F	R	7.69–11.36	Tim 36000TW	Ws4IA	614	922	A	TX	68	9¼x3⅝x⅜x⅞	A
	.....HC97	.....	148	175	24000	9200	9.00/20	11.00/20	Wau 6MZA	6–4¼x4¾	404	5.6	290	130–3000	7–2⅝x12½	Y	Fu 5A43	5	Own 97H	C8	R	6.70–10.82	Tim 35011H	T41HV	540	842	A	TX	67	9x7x¼	A
65	.....HC105	.....	148	175	28000	9700	10.00/20	11.00/22	Wau 6MZA	6–4¼x4¾	404	5.6	290	130–3000	7–2⅝x12½	Y	Fu 5A43‡	15	Own 137H	C8	R	6.70–10.82	Tim 35011H	TL4IHV	540	842	A	TX	67	9x3¼x¼	A
66	.....HC115	.....	148	175	32000	10350	10.00/20	11.00/24	Wau 8RKR	6–4⅝x5½	517	5.5	368	125–2250	7–3x13¾	Y	Fu 5A62‡	15	Own 137W	C8	R	6.70–10.82	Tim 36000TW	Ws4IA	648	974	A	TX	67	9x3¼x¼	A
67	.....HC144	.....	148	175	36000	11250	10.00/22	12.00/24	Wau 68RKR	6–4⅝x5½	517	5.5	368	125–2250	7–3x13¾	Y	Fu 5A62‡	15	Own 148W	C8	R	6.70–10.82	Tim 36000TW	Ws4IA	708	1042	A	TX	67	9¼x3⅝x⅜x⅞	A
68	.....HC147	.....	148	175	36000	11500	10.00/22	12.00/24	Wau 68RKR	6–4⅝x5½	517	5.5	368	125–2250	7–3x13¾	Y	Fu 5A62‡	15	Own 147W	C8	R	6.70–10.82	Tim 36000TW	Ws4IA	708	1042	A	TX	67	9¼x3⅝x⅜x⅞	A
69	.....HC175	.....	167	185	45000	14600	12.00/24†	14.00/24‡	Wau 145GK	6–5¼x6	779	6.	585	186–2100	7–3½x17¾	Y	Fu 4B86♦	12	Own 175W	C8	R	7.31–12.42	Tim 27454W	Ws4IA	786	1152	A	TX	77	9¼x3⅝x⅜x⅞	A
70	.....HC250	.....	178	190	60000	18400	14.00/24‡	14.00/24‡	Wau 145GK	6–5¼x6	779	6.	585	186–2100	7–3½x17¾	Y	Fu 4B86♦	12	Own 251W	C8	R	7.31–12.42	Tim 27454W	Ws4IA	786	1157	A	JX	95	12x3½x⅜	AL
	(D)....HC115H	.....	167	185	32000	12250	10.00/20	11.00/24	Cum HB600	6–4⅞x6	672	17.	500	150–1800	7–4½x16½	Y	Fu 4B86♦	12	Own 137W	C8	R	6.70–10.82	Tim 36000TW	Ws4IA	648	974	A	TX	77	9x3¼x¼	A
71	(D)....HC175H	.....	167	185	45000	14930	12.00/24†	14.00/24‡	Cum HBD600	6–4⅞x6	672	17.	500	150–1800	7–4½x16½	Y	Fu 4B86♦	12	Own 175W	C8	R	7.31–12.42	Tim 27454W	Ws4IA	786	1152	A	TX	77	9¼x3⅝x⅜x⅞	A
72	(D)....HC250H	.....	178	190	60000	18700	14.00/24‡	14.00/24‡	Cum HBD600	6–4¼x6	672	17.	500	150–1800	7–4½x16½	Y	Fu 4B86♦	12	Own 251W	C8	R	7.31–12.42	Tim 27454W	Ws4IA	786	1152	A	JX	95	12x3½x⅜	AL

▲—Includes Cab.
†—Rear only; Front 12.00/24.
‡—Auxiliary transmission, Own OJ.
♦—2-Speed Axle Available.

■—6231 Spicer Auxiliary Transmission.
‡—Rear only; Front 11.00/24.
♦—Auxiliary transmission Own FJ.
▼—Lockheed |Type Front and Timken Dual Primary Rear Brakes.
▽—6231A Spicer Auxiliary Transmission.
♦—8031 F-G Spicer Transmission available.
△—Special W.B.'s available on request.

▲▲—Diameter front 2.343, Center 2.375, Rear 2.406. Total length 5.750.
‡—8200 for 8.25/18 tires.
♦—Two speed rear axle with vacuum shift.

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8200 for 8.25/18 tires.
Two speed rear axle with vacuum shift.

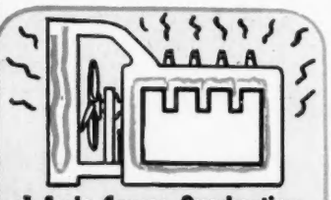
(Continued from Page 96)

Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE Minimum Standard	WHEEL-BASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear: Standard Front and Rear	TIRE SIZES: Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS: Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings: Number, Diameter and Length	Governor Standard	TRANSMISSION: Make and Model	Forward Sp'ds	REAR AXLE: Make and Model	Gear and Type	Drive & Torque	Gear Ratio, Range in High	FRONT AXLE: Make and Model	BRAKES SERVICE: Make, Location, Type Operat'n	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimension (Min. Std. W. B.)	FRAME: Side Rail Dimensions	Type
	Studebaker....M5		113	113	4500	2120	6.50/16	6.50/16S	Own 1M	6–3x4	170	6.5	134	80–4000	4–2⅛x5⅛	N	Own 664949	3	Own 663597	Hy	H	** –4.82	Own 664307	L4IH	157	276	Co	2I	45½	7 x2 x⅛	T
	.....M15A-20		120	120	7800	2960	7.00/17S	7.50/17	Own 2M	6–3x4	170	6.5	134	80–4000	4–2⅛x5⅛	N	Own 673674	4	Own 677768	SF	H	5.83–6.60	Own 646781	LH4IH	216	342	a	TX	52½	7½x2½x⅛	T
	.....M15A-28		128	128	10000	3060	7.50/17S	7.00/20	Own 2M	6–3x4	170	6.5	134	80–4000	4–2⅛x5⅛	N	Own 673674	4	Own 665174	SF	H	6.60–5.83	Own 676461	LH4IH	216	342	a	TX	60½	8⅛x2⅜x⅛	T
1	.....M16		128	195	13500	3630	7.00/20D	8.25/20	Own 3M	6–3⅛x4½	226	6.5	176	94–3600	4–2½x5½	N	Own 674989	4	Own 665171	SF	H	5.66–6.66	Own 664452	LH4IH	280	442	Co	TX	60½	8½x2½x⅛	T
2	.....M16(2–8p)		128	195	15000	3955	7.00/20D	8.25/20	Own 3M	6–3⅛x4½	226	6.5	176	94–3600	4–2½x5½	Y	Own 674989	4	Own 676055	HyF	H	6.13–8.10	Own 664452	LH4IH	280	442	Co	TX	60½	8½x2½x⅛	T
4	Truckstell(C) F18–5		140	194	18500	▲5365	7.50/20*	9.00/20	Ford	8–3⅛x3¾	239	6.4	180	100–3800	3–2½x4.71	N	Ford & BL	12	Cla R1250	SF	H	5.67–6.83	Ford	L4IHV	390	600	a	TX	65¾	7½x3x.47	CTf
5	(C) F19–5–0		108	166	19500	▲5615	7.50/20*	9.00/20	Ford	8–3⅛x3¾	239	6.7	180	100–3800	3–2½x4.71	N	Chev & BL	12	Cla R1250	SF	H	5.67–6.83	Ford	L4IHV	390	600	a	TX	65¾	7½x3x.47	CTf
6	(C) C18–5		147	195	18500	▲5530	7.50/20*	9.00/20	Chevrolet	6–3⅛x3½	235	6.6	192	93–3100	4–2¾x5⅛	N	Chev & BL	12	Cla R1250	SF	H	5.67–6.83	Chevrolet	L4IHV	399	600	a	TX	70	9¾x3x.50	CTf
7	(C) C19–5–0		120	180	19500	▲5700	7.50/20*	9.00/20	Chevrolet	6–3⅛x3½	235	6.6	192	93–3100	4–2¾x5⅛	N	Chev & BL	12	Cla R1250	SF	H	5.67–6.83	Chevrolet	L4IHV	399	600	a	TX	70	9¾x3x.50	CTf
8	Ward La Fr. ..D–1	5340	149	220	25000	9500	10.00/20	11.00/20	Con T6427	6–4⅛x4⅞	427	5.1	340	132–2600	7–2⅞x13½	Y	Ful 5A430	5	Tim 58415PA	B	R	**–6.1	Tim 35011TW	Ws4A	600	928	C	TM	68¼	9¼x3x¼	....
9	.....D–1B	6500	149	220	25000	9500	10.00/20	11.00/20	Con 22R	6–4½x5¼	501	5.4	384	148–2400	7–2⅜x14½	Y	Ful 5A620	5	Tim Q–100	B	R	**–6.83	Tim 35011TW	Ws4A	673	1031	C	TM	68¼	9¼x3x¼	....
10	.....D–1C	6000	162	220	29000	9500	11.00/20	11.00/22	Con T6427	6–4⅛x4⅞	427	5.1	340	132–2600	7–2⅞x13½	Y	Ful 5A430	5	Tim S–200P	S2	R	**–7.84	Tim 35011TW	Ws4A	673	1031	C	TM	68¼	10x3½x⅛	....
11	.....D–2K	7400	149	220	29000	10000	11.00/20	11.00/22	Wau 140GK	6–4½x5½	525	6.4	425	168–2400	7–2¾x13⅜	Y	Ful 5A620	5	Tim S–200P	S2	R	**–7.84	Tim 35011TW	Ws4A	673	1031	C	TM	68¼	10x3½x⅛	....
12	.....D–2Z	7550	149	220	29000	10000	11.00/20	11.00/20	Wau 140GZ	6–4⅝x5½	554	6.4	456	184–2400	7–3¼x13⅛	Y	Ful 5A650	5	Tim S–200P	B	R	**–7.84	Tim 35011TW	Ws4B	673	1031	C	TM	68¼	10x3½x⅛	....
13	.....D–2B	7285	162	220	29000	10000	11.00/20	11.00/22	Con 22R	6–4½x5¼	501	5.4	384	148–2400	7–2¾x14½	Y	Ful 5A620	5	Tim S–200P	S2	R	**–7.84	Tim 35011TW	Ws4B	673	1031	C	TM	68¼	10x3½x⅛	....
14	.....D–3	7900	149	220	29000	10000	11.00/20	11.00/22	Con R6572	6–4⅜x5⅝	572	5.9	440	189–2600	7–3¼x14½	Y	Ful 5A650	5	Tim S–200P	S2	R	**–7.84	Tim 35011TW	Ws4B	673	1031	C	TM	68¼	10x3½x⅛	....
15	.....D–38	8050	149	220	29000	10000	11.00/20	11.00/22	Con R6602	6–4⅞x5⅝	602	5.9	463	198–2600	7–3¼x14½	Y	Ful 5A650	5	Tim U–200	S2	R	**–6.42	Tim 27454	Ws4B	681	1041	C	TM	68¼	10x3½x⅛	....
16	.....D–5	10300	149	220	35000	12500	11.00/22	11.00/24	Cum HB600	6–4¾x6	672	17	500	150–1800	7–4½x16¾	Y	Ful 5A650	5	Tim U–200	S2	R	**–6.42	Tim 27454	Ws4B	681	1041	C	TM	68¼	10x3½x⅛	....
17	Willys (Sd.Del.) 463	1285*	104	104	4000	*2752	6.50/15S	.....	Own 463	4–3⅛x4⅜	134	6.5	105	63–4000	3–2.33xo 48	N	WG T96	3	Spl 23–1	Hy	H	4.88–5.38	Own I Tr	B4IH	133	220	a	2I	....	5x2¼x.063	TfD
18	Willys.....2WD	1189▲	118	118	5300	▲2788	6.50/16S	7.00/16S	Own 2WD	4–3⅛x4⅜	134	6.5	105	60–4000	3–2.33x5.48	N	WG T90E	3	Tim51540NX3	S½	H	5.38–6.17	Cla F–154	B4IH	176	276	a	2I	42.28	5½x2x⅛	TD
	Four-Wheel-Drive																														
19	Corbitt 22FG		159	Opt	22000	.....	9.00/20	10.00/20	Con B6371	6–4½x4⅝	371	6.0	280	100–2600	7–2⅝x13½	Y	Fu 5A43	5	Tim R2090H	2F	H	** –8.43	Tim F2090H	L4IHV	....	868	a	TD	74	9x3x¼	DL
20	Dodge....B–1–PW		126	126	8700	.....	7.50/16–8	9.00/16–8	Own T–137	6–3¼x4½	230	6.7	185	94–3200	4–2½x4.8	Y	NP–38580	4	Own T–137	HyF	H	4.8–5.8	Own T–137	O4IH	210	311	Co	TX	52½	⅛x2⅛x6½	C
21	FWD.....HA		132	156	17000	▲7470	8.25/20D	10.00/20	Wau BZ	6–4x4¼	320	5.9	237	104–3000	7–2⅝x10¼	Y	Own H	5	Own H	SF	H	6.6 –9.06	Own H	L4IHV	391	807	a	T4	79½	9x3x¼	T
22	.....HR		132	154	20000	▲8000	9.00/20	10.00/20	Wau MZA	6–4¼x4¾	404	5.6	291	129–2800	7–2⅝x12⅝	Y	Own H	5	Own H	SF	H	6.6 –9.06	Own H	L4IHV	391	807	a	T4	79½	9x3x¼	T
23	.....HG		154	154	20000	▲8050	9.00/20	10.00/20	Wau MZA	6–4¼x4¾	404	5.6	291	129–2800	7–2⅝x12⅝	Y	Own H	5	Own H	SF	H	6.6 –9.06	Own H	L4IHV	391	807	a	T4	89¾	7⅛x3x⅛	C
24	.....8U		150	182	28000	▲10570	11.00/20D	11.00/20	Wau 8RKR	6–4⅜x5⅜	517	5.5	365	126–2400	7–3x13⅛	Y	Own U	10	Tim 1758	2F	H	** –7.33	Wis F409	Ws4IA	578	976	a	T4	90	10⅛x3x⅛	C
25	.....M7		150	180	38600	▲15500	12.00/20D	12.00/24	Wau 145GK	6–5¼x6	779	6.2	585	186–2000	7–3½x17¾	Y	Own M	10	Tim 1758	2F	H	** –7.33	Wis F409	Ws4IA	578	976	a	T4	90	10⅛x3x⅛	C
26	(D) M7D		150	180	38600	▲15700	12.00/20D	12.00/24	Bu DC844	6–5¼x6½	844	...	605	180–1800	7–3¾x17	Y	Own M	10	Tim 79721	2F	H	** –7.7	Wis F409	Ws4IA	614	1030	a	T4	90	10⅛x3x⅛	C
27	(D) M10D		150	180	44000	▲16400	11.00/24D	12.00/24	Bu DC844	6–5¼x6½	844	...	605	180–1800	7–3¾x17	Y	Own M	10	Tim 79721	2F	H	** –7.7	Wis F409	Ws4IA	614	1030	a	T4	90	10⅛x3x⅛	C
28	Marmon–MH440–4		158	170	24000	▲9300	9.00/20D	10.00/20	Her WXLC3	6–4¼x4¾	404	5.4	293	118–2800	7–2⅝x13¼	Y	Fu 5A430	5	Tim R2090W	2B	H	** –8.43	Tim F2090W	W....A	584	887	c	F	72	9½x3x¼	T
29	Herr...MH555–4		161	173	28000	▲10200	10.00/20D	11.00/20	Her RXC	6–4⅝x5¼	529	6.3	390	131–2200	7–3x13¼	Y	Fu 5A620	5	Tim R3100W	2B	H	** –8.15	Tim F3100W	W....A	692	1039	c	F	72	10⅛x5x⅛	T
30	(C) CM5–4		134	134	13500	▲4847	7.50/20D	7.50/20	Ford	8–3⅛x3¾	239	6.4	180	100–3800	3–2½x4.71	N	Ford	4	Ford	S	H	** –6.67	Own M5	F....H	303	563	a	F	60⅛	7x2⅜x⅛	T
31	(C) CM6–4		158	158	13500	▲4973	7.50/20D	7.50/20	Ford	8–3⅛x3¾	239	6.4	180	100–3800	3–2½x4.71	N	Ford	4	Ford	S	H	** –6.67	Own M5	F....H	303	563	a	F	84⅛	7x2⅜x⅛	T
32	(C) LD6P–4		114	....	.....	.....	15▼	15▼	Ford	8–3⅛x3¾	239	6.4	180	100–3800	3–2½x4.71	N	Ford	4	Ford	S	T	** –4.11	Own O	F....H	162	....	A	F	40⅛	5½x2¼x⅛	T
33	(C) LD6–4		114	....	4700	▲2719	15▼	15▼	Ford	8–3⅛x3¾	239	6.4	180	100–3800	3–2½x4.71	N	Ford	4	Ford	S	H	** –4.11	Own O	F....H	162	....	A	F	40⅛	5½x2¼x⅛	T
34	(C) OT5–4		122	....	6800	▲4500	7.50/17	7.50/17	Ford	8–3⅛x3¾	239	6.4	180	100–3800	3–2½x4.71	N	Ford	4	Ford	S	H	** –4.86	Own I	F....H	186	....	A	F	48	6x2¼x⅛	T
35	Oshkosh....W–312		149	204	25000	10200	10.00/20	11.00/20	Her WXLO3	6–4¼x4¾	404	6.3	312	139–2500	7–2⅝x13¾	Y	Fu 5A43	5	Own W312	SF	H	** –7.8	Own W312	L4I	560	867	G	TX	82	8¼x⅞x⅜	TF
36	.....W1700		150	205	28000	11000	11.00/20D	12.00/208	Her RXC	6–4⅝x5¼	529	5.4	395	131–2200	7–3x13¾	Y	Fu 5A620	5	Own W1700	SF	H	** –6.4	Own 1700	L4IH	630	975	G	TX	82	8¼x⅞x⅜	TF
37	.....W–700		150	204	30000	▲12000	11.00/20	12.00/208	Her RXCO	6–4⅝x5¼	529	5.4	395	131–2200	7–3x12⅞	Y	Fu 5A620	10	Own W700	2F	H	** –6.6	Own W700	L4IH	630	975	G	TX	82	10½x3x⅜	TF
38	.....W–703		150	204	30000	▲12200	11.00/20	12.00/208	Her RXLD	6–4¾x5¼	558	5.4	430	150–2200	7–3½x13¼	Y	Fu 5A620	10	Own W700	2F	H	** –6.6	Own W700	L4IH	630	975	G	TX	82	10½x3x⅜	TF
39	.....W–705		150	204	30000	▲12200	11.00/20	12.00/208	Her RXLD	6–4¾x5¼	558	5.4	430	150–2200	7–3½x13¼	Y	Fu 5A620	10	Own W700	2F	H	** –6.6	Own W700	L4IH	630	975	G	TX	82	10½x3x⅜	TF
40	(D) W–906		158	190	38000	▲15600	12.00/20	14.00/208	Cum HB600	6–4¾x6	672	...	500	150–1800	7–4½x16	Y	Fu 4A86	12	Own W906	2F	H	** –6.2	Own W906	LT41WS	645	975	G	TX	90	10½x3½x⅜	TF
41	.....W2200		160	181	40000	16500	13.00/20D	14.00/208	Bu MO779	6–5¼x6	779	...	575	188–2100	7–3⅜x17	Y	Fu 4A86	12	Own W2200	2F	H	** –6.14	Own 2200	LT4IA	645	975	G	TX	90	10¼x3½x⅜	TF
42	.....W2201		160	181	40000	16500	13.00/20D	14.00/208	Bu MO893	6–5¾x6	893	...	625	200–1800	7–3¾x17	Y	Fu 4A86	12	Own W2200	2F	H	** –6.14	Own 2200	LT4IA	645	975	G	TX	90	10¼x3½x⅜	TF
43	(D) W2204		160	181	46000	18500	13.00/20D	14.00/24	Bu 6DC844	6–5¼x6	844	...	605	180–1800	7–3¾x17	Y	Fu 4A86	12	Own W2204	2F	H	** –6.4	Own 2204	LT4IA	740	1190	G	TX	90	10½x3½x⅜	TF
44	Peterbilt(D)270DD		165	Opt	27000	12500	10.00/20D	11.00/22	Cum HB600	6–4¾x6	672	17	500	150–1800	7–4½x16½	Y	Spl 7741	12	U–200P	2F	R	** –6.42	Tim 36000W	Ws4IA	800	1250	a	FD	80½	10⅜x3¼x⅛	TL
45	Sterling....DD115		160	178	32000	11500	10.00/20	11.00/24	Wau 6SRKR	6–4⅜x5½	517	5.5	368	125–2250	7–3x13¼	Y	Fu 5A62†	10	Tim 1357W	2F	R	6.65–8.6	Tim F3110W	Ws4IA	644	984	A	TX	76	9x3¼x¼	A
46	(D)....DD145H		167	185	36000	13900	11.00/20	12.00/24	Cum HB600	6 4¾x6	672	17	500	150–1800	7–4½x16½	Y	Fu 4B86‡	10	Tim 1758W	2F	R	7.33–10.3	Tim F409CW	Ws4IA	644	984	A	TX	77	9¼x3½x⅜	A
47	Walter(c.f.)....FN		126	150	20000	7500	9.00/20D	10.00/208	Wau MZA	6–4¼x4¾	404	5.6	290	125–2600	7–2⅛x12½	Y	Own FN	6	Own FNB	2	H	6.0–8.0	Own FN	O4IA	470	670	G	FI	84	7x2¾x¼	C
48	(c.f.)...FZM		126	150	24000	8500	10.00/20D	12.00/208	Wau MZA	6–4¼x4¾	404	5.6	290	125–2600	7–2½x12½	Y	Own FN	6	Own FMB	2	H	6.0–8.0	Own FJ	O4IA	470	670	G	FI	84	12x3½x½	B
49	(c.f.)...FCK		126	138	30000	10500	10.00/24D	11.00/248	Wau 8RKR	6–4⅜x5¼	517	5.5	365	125–2200	7–3x13¾	Y	Own FC	6	Own FCB	2	H	7.5–9.0	Own FC	O4IA	585	890	D	FI	84	13x3¾x½	B
50	(c.f.)...FC		138	162	32000	11000	11.00/24D	12.00/248	Wau 8RKR	6–4⅜x5¼	517	5.5	365	125–2200	7–3x13¾	Y	Own FC	6	Own FCB	2	H	7.5–9.0	Own FCR	O4IA	585	890	D	FI	84	14x3¾x½	B
51	(c.f.)...FGB		126	162	32000	12000	11.00/24D	12.00/248	Wau 145GK	6–5¼x6	779	5.7	580	185–2000	7–3½x17¾	Y	Own FA	6	Own FCB	2	H	7.5–9.0	Own FCR	O4IA	585	890	D	FI	89	14x3¾x½	B
52	(c.f.)...FGR		126	162	42000	13000	12.00/24D	12.00/24	Wau 145GK	6–5¼x6	779	5.7	580	185–2000	7–3½x17¾	Y	Own FA	6	Own FCR	2	H	7.5–9.0	Own FCR	O4IA	585	890	D	FI	89	14x3¾x½	B
53	Willys Unv. Jp...CJ–2A	*1146	80	80	3500	*2169	6.00/16	7.00/15	Own CJ–2A	4–3⅛x4⅜	134	6.5	105	60–4000	3–2.33x5.48	N	WG T90C	‡6	Spl 41–2	Hy	H	** –5.38	Spl 25	B4IH	118	198	a	F	....	4x1¾x⅛	P
54	.....4WD	▲1495	118	118	5300	▲2920	7.00/16	.....	Own 4WD	4–3½x4⅜	134	6.5	105	60–4000	3–2.33x5.48	Y	WGT90A	‡6	Tm 51540NX3	S½	H	** –5.38	Spl 25	B4IH	176	276	a	2I	42.28	5½x2x⅛	TD
	Six-Wheelers Wheels ▼ Driven																														
55	Federal....663MA		189	225	40000	14500	10.00/20	10.00/22	Con R6602	6–4⅞x5⅝	602	6.1	464	200–2600	7–3¼x14½	Y	Fu 5A65▼	15	T SW3012P	WF	R	** –6.16	Tim 36000TW	Ws6IA	1082	1569	a	TD	108	10½x3½x⅛	T
56	.....664MAB		189	225	55000	15850	11.00/22	12.00/20	Con R6602	6–4⅞x5⅝	602	6.1	464	200–2600	7–3¼x14½	Y	Spl 7741▼	12	Tim SW456P	WF	R	** –7.6	Tim 27452W	Ws6IA	1308	1888	a	TD	108	10½x3½x⅛	T
57	.....664MA		189	225	55000	1o950	11.00/22	12.00/20	Con R6602	6–4⅞x5⅝	602	6.1	464	200–2600	7–3¼x14½	Y	Spl 7741▼	12	Tim SD462P	BR	R	** –8.15	Tim 27452W	Ws6IA	1092	1624	a	TD	108	10½x3½x⅛	T
58	F.W.D.....M6x6		Opt	Opt	58000	▲21400	11.00/24D	11.00/24	Wau 145GK	6–5¼x6	779	6.2	585	186–2000	7–3½x17¾	Y	Own M	10	Wis SD462	2F	L	** –10.6	Wis F409	Ws6IA	1080	1680	a	T6	183	10⅛x3x⅛	P
59	(D) M6X6D		Opt	Opt	58000	▲21600	11.00/24D	11.00/24	Bu DC844	6–5¼x6½	844	...	605	180–1800	7–3¾x17	Y	Own M	10	Wis SD462	2F	L	** –10.6	Wis F409	Ws6IA	1080	1680	a	T6	216	10⅛x3x⅛	P

▲ Includes Cab. ▼ Auxiliary transmission Spicer 703F with 3 forward speeds. * Complete vehicle. † Timken T76—2 speed transfer case. ° Front only; Rear 8.25/–0
‡ Three speed transmission—2 speed transfer case. • Timken T13126PA Trailing Axle. ‡ Timken T77 2-speed Transfer Case.

(Turn to Page 100, please)

AMAZING
BUTLER
DE-SCALER
Eliminates Hidden Cause of Most of Your Engine Troubles



1. Scale Causes Overheating. Scale acts as an insulator—prevents heat transference from combustion chamber to cooling system water. Result: while temperature gauge registers normal, the engine overheats — oil burns, varnish forms, piston rings and vital engine parts wear out—and big repair bills pile up!

2. Butler De-Scaler Ends Scale. Installed in radiator hose or radiator according to directions, Butler De-Scaler's galvanic cell action causes scale and rust to dissolve throughout the cooling system and drop to the bottom of radiator in small particles for easy removal.

3. Water Stays Crystal Clear. Once clean, no further scale or rust can form. Corrosion is prevented. pH is automatically maintained slightly alkaline. Hot spots, sticky valves, troubles at thermostat, pump and heater due to particles in water are eliminated. Protects aluminum parts from disintegration.

Here's a Guaranteed Way to Hold Repair Costs Down

FLEET OWNERS! You can keep operating costs down if you install the amazing Butler De-Scaler, already a proved success on thousands of trucks and buses from coast to coast. Eliminates engine troubles due to *scale, rust, corrosion* in cooling systems. Butler De-Scaler removes rust and scale, prevents new formation for 1 year or 25,000 miles. *And that statement is backed by a MONEY-BACK GUARANTEE!*

It's a sure way to end overheating caused by scale. Prevents wear on piston rings and other parts. Stops back-flushing, boiling out—cuts breakdowns and shop lay-ups. Does not interfere with anti-freeze or stop-leak.

Those new trucks or buses you've added will be off to a good start if you install Butler De-Scalers NOW ... and prevent rust or scale from *ever forming* in cooling systems.

PRICES ARE DOWN TOO!

Effective March 1, 1948, the new low list price of the Butler De-Scaler is only $2.95, reduced from $4.95 as a result of increased demand and new production methods. That means bigger savings than ever for you when you order from your jobber on a **quantity discount basis.** Get in touch with him today. He'll also tell you the details about Butler De-Scaler performance and the MONEY-BACK GUARANTEE. Or, write direct to Butler Engineering Company, 2610 Rousseau St., New Orleans 11, Louisana.

BUTLER
De-scaler

See Your Butler Jobber for Quantity Discount

NOW—$2.95 each

Sold under Fair Trade Agreement in States where Fair Trade Laws have been Enacted.

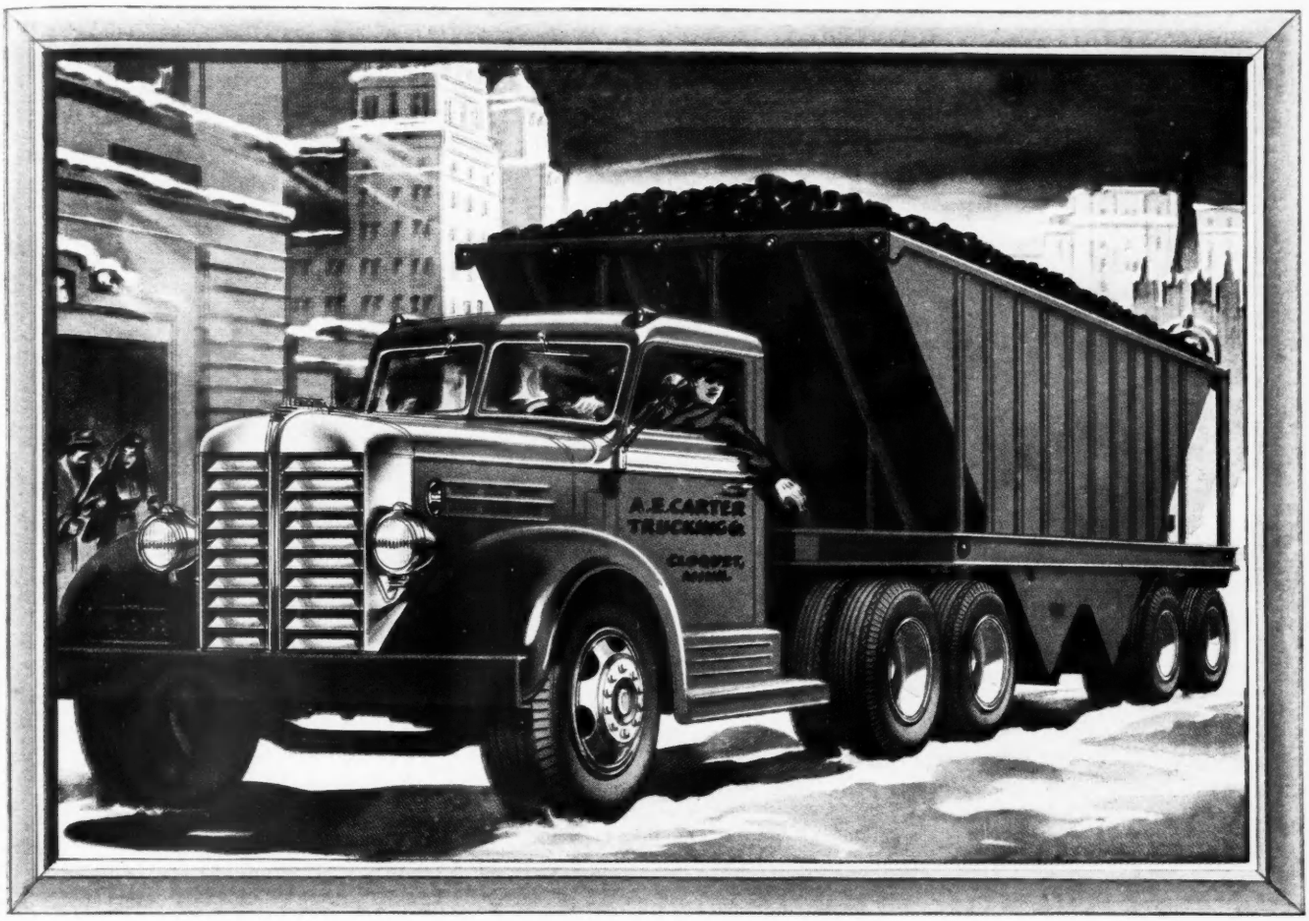
Butler De-Scaler Model AT1 covered by U. S. Patent No. 2,424,145. Other U. S. and foreign patents pending.

ELIMINATES RUST - KEEPS COOLING SYSTEM CLEAN

(CONTINUED FROM PAGE 98)

Line Number	MAKE AND MODEL	Chassis List Price	WHEEL-BASE Minimum Standard	WHEEL-BASE Maximum Standard	Gross Vehicle Weight for Normal Service	Chassis Weight (See definition)	TIRE SIZES D-dual rear S-single rear Standard Front and Rear	TIRE SIZES Maximum Authorized Tire Size (Duals unless noted)	ENGINE DETAILS Make and Model	No. of Cylinders, Bore and Stroke	Displacement	Comp. Ratio	Torque lb. ft.	Max. Brake H.P. at R.P.M. Given	Main Bearings Number, Diameter and Length	Governor Standard	TRANSMISSION Make and Model	Forward Sp'ds	REAR AXLE Make and Model	Gear and Type	Drive & Torque	Gear Ratio Range in High	FRONT AXLE Make and Model	BRAKES SERVICE Make	Location	Type	Operat'n	Lining Area	Drum Area	Drum Material	Hand Location Type	C-A Dimension (Min. Std. W. B.)	FRAME Side Rail Dimensions	Type
	International (2)																																	
1	.....KB-6F.4R	3150	151	194	22000	7010	7.50/20D	8.25/20	Own BLD250	6–3 7/16 x4 1/2	251	6.3	200	100–3200	4–2 1/16 x5 1/16	N	Own F51	5	Own RF1450	SF	H	6.16–6.66	Own F470	LH4IHV	495	869	c	PX	77	8 1/16 x 3 1/16 x 3/16	T
2	.....KB-8F.4R	4700	161	215	27000	8670	8.25/20D	9.00/20	Own RED361	6–4 1/2 x4 1/2	361	6.3	282	126–3000	7–3 1/4 x10 1/16	Y	Own F52	5	Own RF1560	SF	H	6.50–7.16	Own F550	LH6IHV	644	1105	c	PX	84	9 1/4 x3 3/16 x 3/16	T
3	.....KB-11F.4R	7125	161	215	37000	10830	9.00/20D	10.00/20	Own RED450	6–4 5/8 x5	451	6.3	360	148–2600	7–3 1/4 x10 1/16	Y	Own F54	5	Own RF1670	SF	H	** –7.16	Own F760	TW6IA	738	1179	G	PX	84	11 0x3 3/16 x 3/16	T
4	.....W4064L	12425	203	239	40000	15750	10.00/22	11.00/22	Cum HB600	6–4 7/16 x6	672	17.	492	150–1800	7–4 1/2 x....	Y	Spi 7741	4	Tim SW3012	WF	L	4.71–6.16	Own 82F	BW4IA	876	....	....	PX	108	10x3 1/2 x 1/4	C
5	.....W4564OH	13200	188	242	45000	16635	10.00/22	11.00/22	Cum HB600	6–4 7/16 x6	672	17.	492	150–1800	7–4 1/2 x....	Y	Spi 7741	4	Tim SW456	WF	H	6.00–7.6	Own 83F	BW4IA	1020	....	....	PX	90	10x3 1/2 x 1/4	L
6	.....W6564OH	15700	206	302	65000	19895	11.00/24	12.00/24	Cum HB600	6–4 7/16 x6	672	17.	492	150–1800	7–4 1/2 x....	Y	Spi 7741	4	Tim SD466	2F	H	8.15–11.66	Own 82F	BW4IA	....	....	....	PX	108	10x3 1/2 x 1/4	L
	Kenworth																																	
7	.....(D)....522		187	245	43000	12900	10 00/20	11.00/22	Cum HB6	6–4 7/16 x6	672	17.	500	150–1800	7–4 1/16 x16 1/2	Y	BL 7841	4	Tim U200P&●	....	....	....	Tim 36000TW	Ws4IA	1135	....	....	....	....	9 1/16 x3 1/4 x 1/4	..
8	.....(D)523.4R		193	241	41000	14600	10.00/20	11.00/22	Cum HB6	6–4 7/16 x6	672	17.	500	150–1800	7–4 1/16 x16 1/2	Y	BL 7841	4	Tl SW3012PA	WF	R	** –6.16	Tim 36000	Ws4rIA	924	1248	a	TD	102	9 1/16 x3 1/4 x 1/4	C
9	.....(D)524.4R		193	241	54000	15100	10.00/20	11.00/22	Cum HB6	6–4 7/16 x6	672	17.	500	150–1800	7–4 1/16 x16 1/2	Y	BL 7841	4	Tim SW452	WF	R	6.0 –7.6	Tim 36000	Ws4rIA	819	1192	a	TD	102	9 1/16 x3 1/4 x 1/4	C
10	.....528.4R		186	234	40000	12500	10.00/20	10.00/22	Bud LO525	6–4 1/16 x5 1/16	525	5.5	385	150–2200	7–3x11 1/16	Y	Fu 5A620	5	Tl SW3012PA	WF	R	** –6.16	Tim 35100	Ws4rIA	924	1248	a	TD	102	9 1/16 x3 1/4 x 1/4	C
11	.....(D)548.4R		193	241	54000	17000	11.00/22	12.00/24	Cum HB6	6–4 7/16 x6	672	17.	500	150–2200	7–4 1/16 x16 1/2	Y	BL 7841	4	Tim SD462	DR	R	** –8.15	Tim 36000	Ws4rIA	819	1192	a	TD	109	9 1/16 x3 1/4 x 1/4	dbC
12	.....(D)552.4R		255	255	54000	20700	13.00/24	13.00/24	Cum HB6	6–4 7/16 x6	672	17.	500	150–1800	7–4 1/16 x16 1/2	Y	BL 7841	4	Tim SD462W	WF	R	** –8.15	Tim F3200W	Ws4rIA	1109	1192	a	TD	168	9 1/16 x3 1/4 x 1/4	dbC
13	(D).....825		193	241	42000	14900	10.00/20	11.00/22	Cum HB6	6–4 7/16 x6	672	17.	500	150–1800	7–4 1/16 x16 1/2	Y	BL7841	4	TGSW458P	WF	..	6.0–7.6	Tim 36000	Ws4rIA	1016	....	a	TD	102	9 1/16 x3 1/4 x 1/4	C
14	829		186	234	42000	14650	10.00/20	11.00/22	Bud LO525	6–4 1/2 x5 1/16	525	5.5	385	150–2200	7–3x11 1/16	Y	Fw5A620	5	TSD3010P	DR	R	–8.27	Tim 36000	Ws4rIA	924	....	a	TD	104	9 1/16 x3 1/4 x 1/4	....
	Marmon-Herr.																																	
15	(C).....CM5-6		156	....	22500	▲6673	7.50/20D	7.50/20	Ford	8–3 1/8 x3 3/4	239	6.4	180	100–3800	3–2 1/16 x4.71	N	Ford	4	Timken	S	H	** –6.67	Own M5	M	503	....	a	F	82 1/8	7 1/16 x3x 1/4	C
16	(C).....CM6-6		180	....	22500	▲6710	7.50/20D	7.50/20	Ford	8–3 1/8 x3 3/4	239	6.4	180	100–3800	3–2 1/16 x4.71	N	Timken	S	H	** –6.67	Own M5	M	503	....	a	F	106 3/4	7 1/16 x3x 1/4	C
17	.....MH440-6		182	....	34000	▲10600	9.00/20	10.00/20	Her WXLC3	6–4 1/4 x4 3/4	404	5.4	239	118–2800	7–2 5/16 x13 1/4	Y	Fu 5A430	5	Tim SFD154	2B	H	** –8.43	Tim F2090W	Ws..A	876	....	C	F	96	9 1/4 x3x 1/4	T
18	.....MH-555-6		182	....	42000	▲14900	11.00/20	11.00/20	Her RXC	6–4 5/16 x5 1/4	529	6.3	390	131–2200	7–3x13 1/4	Y	Fu 5A620	5	Tim SD3000	2B	H	** –8.15	Tim F3200W	Ws..A	1092	1608	..	F	93	10 1/16 x3x 1/16	T
	Oshkosh																																	
19	.....W703-6X6		Opt	Opt	47000	16950	11.00/20D	12.00/20	Her RXLD	6–4 3/4 x5 1/4	558	5.4	430	150–2200	7–3 1/16 x13 1/4	Y	Fu 5A650	12	Tim SD454W	2F	H	** –6.31	Own-Tim	L6IH	1080	1625	G	TX	Opt	10 1/4–3 1/16–3/4	B
20	(D)...W1600BD		245	Opt	60000	22770	11.00/24D	12.00/24	Bu 6DC844	6–5 1/4 x6 1/2	844	...	600	180–1800	7–3 3/4 x17	Y	Fu 4B186	12	Tim SD462	2F	H	** –6.14	Own-Tim	LT61A	1080	1625	G	TX	160	12 3/8–3 7/8–3/4	B
21	(D)§W1600BDH		267	Opt	60000	24300▲	11.00/24D	12.00/24	Bu 6DC844	6–5 1/4 x6 1/2	844	...	600	180–1800	7–3 3/4 x17	Y	Fu 4B186	12	Tim SD462	2F	H	** –9.82	Own-Tim	LT61A	1080	1625	G	TX	174	12 3/8–3 7/8–3/4	B
22	(D)§W1602BDH		272	Opt	95000	29300	14.00/24D	14.00/24	Bu 6DC844	6–5 1/4 x6 1/2	844	...	600	180–1800	7–3 3/4 x17	Y	Fu 4B186	12	Tim SD472	2F	H	** –13.9	Own-Tim	LT61A	..	2217	G	TX	177	12 3/8–3 7/8–3/4	B
23	.....W1600BG		245	Opt	60000	22770	11.00/24D	12.00/24	Bu MO893	6–5 5/8 x6	893	...	625	200–1800	7–3 3/4 x17	Y	Fu 4B186	12	Tim SD462	2F	H	** –9.82	Own-Tim	LT61A	1080	1625	G	TX	160	12 3/8–3 7/8–3/4	B
24	(D)...W1600CD		259	Opt	60000	23400▲	11.00/24D	12.00/24	Cum 6HBI	6–4 7/16 x6	672	...	500	150–1800	7–4 1/16 x16	Y	Fu 4B186	12	Tim SD462	2F	H	** –6.14	Own-Tim	LT61A	1080	1625	G	TX	174	12 3/8–3 7/8–3/4	B
25	(D)..W1600CDS		259	Opt	60000	23700▲	11.00/24D	12.00/24	Cum 6HBIS	6–4 7/16 x6	672	...	635	200–1800	7–4 1/16 x16	Y	Fu 4B186	12	Tim SD462	2F	H	** –9.82	Own-Tim	LT61A	1080	1625	G	TX	174	12 3/8–3 7/8–3/4	B
26	(D)..§W1600CDH		265	Opt	60000	24000▲	11.00/24D	12.00/24	Cum 6HBI	6–4 7/16 x6	672	...	500	150–1800	7–4 1/16 x16	Y	Fu 4B186	12	Tim SD462	2F	H	** –9.82	Own-Tim	LT61A	1080	1625	G	TX	172	12 3/8–3 7/8–3/4	B
27	(D)..§W1600CDSH		267	Opt	60000	24300▲	11.00/24D	12.00/24	Cum 6HBIS	6–4 7/16 x6	672	...	635	200–1800	7–4 1/2 x16	Y	Fu 4B186	12	Tim SD462	2F	H	** –6.14	Own-Tim	LT6IA	1080	1625	G	TX	174	12 3/8–3 7/8–3/4	B
28	Peterbilt(D)344DT		189	Opt	43000	16250	10.00/20D	11.00/22	Cum HB600	6–4 7/16 x6	672	17.	500	150–1800	7–4 1/16 x16 1/2	Y	Spi 7741	12	TimSW3012W	WF	A	6.00– 8.5	T 36000W	Ws6IA	1212	1734	a	FD	106 1/2	10 3/16 x3 1/4 x 1/4	TL
29	(D).....345D1		187	Opt	54000	17300	10.00/20D	11.00/22	Cum HB600	6–4 7/16 x6	672	17.	500	150–1800	7–4 1/16 x16 1/2	Y	Spi 7741	12	Tim SW456W	WF	A	6.00–10.2	T 36000W	Ws6IA	1450	1626	a	FD	106 1/2	10 3/16 x3 1/4 x 1/4	TL
30	(D).....354DT		187	Opt	56000	17450	10.00/20D	11.00/22	Cum HB600	6–4 7/16 x6	672	17.	500	150–1800	7–4 1/16 x16 1/2	Y	Spi 7741	12	Tim SW456W	WF	A	6.00–10.2	T 27454W	Ws6IA	1450	1626	a	FD	106 1/2	10 3/16 x3 1/4 x 1/4	TL
31	(D).....355DT		187	Opt	56000	17900	10.00/20D	11.00/22	Cum HB600	6–4 7/16 x6	672	17.	500	150–1800	7–4 1/2 x16 1/2	Y	Spi 7741	12	Tim SD462W	2F	A	** –8.15	T 27454W	Ws6IA	1000	1626	a	FD	106 1/2	10 3/16 x3 1/4 x 1/16	TL
32	Reo.....C-256		169	200	40000	13100▲	10.00/20	10.00/20	Con T6427	6–4 1/8 x4 7/16	427	6.2	336	153–2800	7–2 7/16 x13.5	Y	Cla 270V&▼	15	Tim SD3010	SF2	T	–7.5	Tim 35000	Ws4IA	1020	1470	var	TD	104 3/16	9 1/16 x3 1/8 x 1/4	TfP
33	316		186	248	54000	15550▲	10.00/20	10.00/20	Con R6602	6–4 3/16 x5 1/16	602	5.9	464	200–2600	7–3 1/4 x14.5	Y	Spi 6252&▼	15	Tim SD454	SF2	T	6.8–8.15	Tim 36000	Ws4IA	1082	1570	var	TD	108	10 1/4 x3 1/4 x 3/16	TfP
34	Sterling...HBS130		164	183	32000	11000	8.25/20	10.00/20	Wau 6MZA	6–4 1/4 x4 3/4	404	5.6	290	130–3000	7–2 5/16 x12 1/16	Y	Fu 5A43	5	T-SBD1555DPH	SF	L	6.80–13.14	T-35011H	T6IHV	664	1134	A	TX	83	9x3 1/4 x 1/4	A
35	.....HDS140		164	183	36000	11800	9.00/20	10.00/20	Wau 6MZA	6–4 1/4 x4 3/4	404	5.6	290	130–3000	7–2 5/16 x12 1/2	Y	Fu 5A43	5	T-SD3010PA	2F	L	6.84–10.22	T-35011TW	Ws6IA	1074	1554	A	TX	83	9x3 1/4 x 1/4	A
36	.....HWS160		164	183	36000	12800	10.00/20	11.00/22	Wau 68RKR	6–4 5/16 x5 1/8	517	5.5	368	125–2250	7–3x13 3/4	Y	Fu 5A62	5	T-SW3010PA	WF	L	5.40–8.50	T-36000TW	Ws6IA	1082	1574	A	TX	83	9x3 1/4 x 1/4	A
37	.....HWS235		182	193	52000	15700	11.00/20	11.00/24	Wau 145GK	6–5 1/4 x6	779	6.2	585	186–2100	7–3 1/16 x17 3/4	Y	Fu 4B86	4	T-SW456P	WF	L	5.67–8.20	T-27454W	Ws6IA	1308	1892	A	TX	92	9 1/4 x3 5/16 x3 5/8	A
38	(D)...HWS160H		182	193	42000	14250	10.00/20	11.00/22	Cum HB600	6–4 7/16 x6	672	17.	500	150–1800	7–4 1/16 x16 1/2	Y	Fu 4B86	4	T-SW3012PA	WF	L	4.71–6.17	T-36000TW	Ws6IA	1082	1574	A	TX	92	9x3 1/4 x 1/4	A
39	(D)...HWS235H		182	193	52000	16000	11.00/20	11.00/24	Cum HB600	6–4 7/16 x6	672	17.	500	150–1800	7–4 1/16 x16 1/2	Y	Fu 4B86	4	T-SW456P	WF	L	5.66–8.20	T-27454W	Ws6IA	1308	1892	A	TX	92	9 1/4 x3 5/16 x3 5/8	A
40	.....HCS195		170	189	48000	15300	10.00/20	11.00/22	Wau 140GK	6–4 1/2 x5 1/16	525	6.0	426	142–2200	7–3 1/4 x13 3/8	Y	Fu5A62-3A92	15	Own 195W	CD	R	6.04–7.31	T-36000TW	Ws6IA	1082	1622	A	TX	83	9 1/4 x3 5/8 x3 5/8	A
41	.....HCS265		182	193	60000	17750	11.00/20	12.00/24	Wau 145GK	6–5 1/4 x6	779	6.2	585	186–2100	7–3 1/16 x17 3/4	Y	Fu 4B86♦	12	Own 265W	CD	R	9.21–13.16	T-27454W	Ws6IA	1060	1732	A	JX	92	9 1/4 x3 5/8 x3 5/8	A
42	.....HCS297		182	193	70000	20750	12.00/24●	13.00/24△	Wau 1x5GK	6–5 1/4 x6	779	6.2	585	186–2100	7–3 1/16 x17 3/4	Y	Fu 4B86♦	12	Own 330W	CD	R	9.21–13.16	T-27454W	Ws6IA	1280	1872	A	JX	92	9 1/4 x3 5/8 x3 5/8	AL
43	.....HCS330		174	187	80000	23150	12.00/24	14.00/24△	Wau 145GK	6–5 1/4 x6	779	6.2	585	186–2100	7–3 1/16 x17 3/4	Y	Fu 4B86♦	12	Own 330W	CD	R	9.21–13.16	T-27454W	Ws6IA	1280	1872	A	JX	91	12x3 1/16 x3 5/8	AL
44	(D)...HCS195H		182	193	48000	16000	10.00/20	11.00/22	Cum HB600	6–4 7/16 x6	672	17.	500	150–1800	7–4 1/16 x16 1/2	Y	Fu4B86-3A92	12	Own 195W	CD	R	6.04–7.31	T-36000TW	Ws6IA	1082	1622	A	TX	92	9 1/4 x3 5/8 x3 5/8	A
45	(D)...HCS265H		182	193	60000	18100	11.00/20	12.00/24	Cum HBD600	6–4 5/16 x6	672	17.	500	150–1800	7–4 1/16 x16 1/2	Y	Fu 4B86♦	12	Own 265W	CD	R	9.21–13.16	T-27454W	Ws6IA	1060	1732	A	JX	92	9 1/4 x3 5/8 x3 5/8	A
46	(D)...HCS297H		182	193	70000	21050	12.00/24●	13.00/24△	Cum HBD600	6–4 7/16 x6	672	17.	500	150–1800	7–4 1/16 x16 1/2	Y	Fu 4B86♦	12	Own 330W	CD	R	9.21–13.16	T-27454W	Ws6IA	1280	1872	A	JX	92	9 1/4 x3 5/8 x3 5/8	AL
47	(D)...HCS330H		174	187	80000	23450	12.00/24	14.00/24△	Cum HBD600	6–4 7/16 x6	672	17.	500	150–1800	7–4 1/16 x16 1/2	Y	Fu 4B86♦	12	Own 330W	CD	R	9.21–13.16	T-27454W	Ws6IA	1280	1872	A	JX	91	12x3 1/16 x3 5/8	AL
	Truckstell																																	
48	(C)...F2X26.2F		156	237	26000	▲5900	7.50/20	8.25/20	Ford	8–3 1/8 x3 3/4	239	6.4	180	100–3800	3–2 1/16 x4.71	N	Ford	4	Ford	SF	..	** –6.67	Ford	F6IHV	502	836	Co	TX	82 1/2	7 1/16 x3x .47	CT f
49	(C)..F2X27-0.2F		156	237	27000	▲6450	7.50/20	8.25/20	Ford	8–3 1/8 x3 3/4	239	6.4	180	100–3800	3–2 1/16 x4.71	N	Ford	8	Eat 1350	SFd	..	5.83–8.11	Ford	F6IHV	502	836	Co	TX	82 1/2	7 1/16 x3x .47	CT f
50	(C)....F2X34.2F		156	237	34000	▲8335	7.50/20	9.00/20	Ford	8–3 1/8 x3 3/4	239	6.4	180	100–3800	3–2 1/16 x4.71	N	F and BL	12	Cla R1250	SF	..	5.67–6.83	Ford	F6IHV	635	1033	Co	TX	82 1/2	7 1/16 x3x .47	CT f
51	(C).....F2X34–0		135	224	34000	▲8585	7.50/20	9.00/20	Ford	8–3 1/8 x3 3/4	239	6.4	180	100–3800	3–2 1/16 x4.71	N	Ford and BL	12	Cla R1250	SF	..	5.67–6.83	Ford	F6IHV	635	1033	Co	TX	82 1/2	7 1/16 x3x .47	CT f
52	(C)...F4X26.4R		144	210	26000	▲6300	7.50/20	8.25/20	Ford	8–3 1/8 x3 3/4	239	6.4	180	100–3800	3–2 1/16 x4.71	N	Ford	8	Ford	SF	..	6.07–10.5	Ford	F6IHV	502	836	Co	TX	63 1/8	7 1/16 x3x .47	CT f
53	(C).....F4X27–0		117	180	27000	▲6300	7.50/20	8.25/20	Ford	8–3 1/8 x3 3/4	239	6.4	180	100–3800	3–2 1/16 x4.71	N	Ford	8	Ford	SF	..	6.07–10.5	Ford	F6IHV	502	836	Co	TX	63 1/8	7 1/16 x3x .47	CT f
54	(C)...F4X29.4R		144	210	29000	▲7000	7.50/20	8.25/20	Ford	8–3 1/8 x3 3/4	239	6.4	180	100–3800	3–2 1/16 x4.71	N	Ford	16	Eat 1350	SFd	..	7.47–12.9	Ford	F6IHV	502	836	Co	TX	63 1/8	7 1/16 x3x .47	CT f
55	(C).....F4X30–0		117	180	30000	▲7200	7.50/20	8.25/20	Ford	8–3 1/8 x3 3/4	239	6.4	180	100–3800	3–2 1/16 x4.71	N	Ford	16	Eat 1350	SFd	..	7.47–12.9	Ford	F6IHV	502	836	Co	TX	63 1/8	7 1/16 x3x..7	CT f
56	(C)...C2X26.2F		157	234	26000	▲5800	7.50/20	8.25/20	Chevrolet	6–3 1/8 x3 11/16	235	6.6	192	93–3100	4–2 3/4 x5 1/16	N	Chevrolet	4	Chevrolet	SF	..	** –6.17	Chevrolet	C6IHV	546	780	Co	2I	82 1/4	7 1/16 x8x .47	CT f
57	(C)...C2X28.2F		157	234	28000	▲6500	7.50/20	8.25/20	Chevrolet	6–3 1/8 x3 11/16	235	6.6	192	93–3100	4–2 3/4 x5 1/16	N	Chevrolet	8	Tim	SFd	..	5.64–8.22	Chevrolet	C6IHV	546	780	Co	2I	82 1/4	7 1/16 x3x .47	CT f
58	(C).....C2X34–0		141	224	34000	▲8590	7.50/20	9.00/20	Chevrolet	6–3 1/8 x3 11/16	235	6.6	192	93–3100	3–2 3/4 x5 1/16	N	C and BL	8	Cla R1250	SFd	..	5.67–6.83	Chevrolet	C6IHV	659	1033	Co	TX	82 1/4	9 1/16 x3x .50	CT f
59	(C)...C2X34.2F		157	234	34000	▲8420	7.50/20	9.00/20	Chevrolet	6–3 1/8 x3 11/16	235	6.6	192	93–3100	4–2 3/4 x5 1/16	N	C and BL	12	Cla R1250	SF	..	5.67–6.83	Chevrolet	C6IHV	659	1033	Co	TX	82 1/4	9 1/16 x3x .50	CT f
60	(C)...C4X26.4R		145	212	26000	▲6120	7.50/20	7.50/20	Chevrolet	6–3 1/8 x3 11/16	235	6.6	192	93–3100	3–2 3/4 x5 1/16	N	Chevrolet	8	Chevrolet	SF	..	6.41–11.1	Chevrolet	C6IHV	546	780	Co	2I	63 3/8	7 1/16 x3x .47	CT f
61	(C)....C4X27–0		117	184	27000	▲6215	7.50/20	7.50/20	Chevrolet	6–3 1/8 x3 11/16	235	6.6	192	93–3100	3–2 3/4 x5 1/16	N	Chevrolet	8	Chevrolet	SF	..	6.41–11.1	Chevrolet	C6IHV	546	780	Co	2I	63 3/8	7 1/16 x3x .47	CT f
62	(C)...C4X29.4R		145	212	29000	▲6880	7.50/20	8.25/20	Chevrolet	6–3 1/8 x3 11/16	235	6.6	192	93–3100	3–2 3/4 x5 1/16	N	Chevrolet	16	Eat 1350	SFd	..	7.47–12.9	Chevrolet	C6IHV	512	836	Co	TD	63	7 1/16 x3x .47	CT f
63	.....C4X30–0		117	184	30000	▲7290	7.50/20	8.25/20	Chevrolet	6–3 1/8 x3 11/16	235	6.6	192	93–3100	4–2 3/4 x5 1/16	N	Chevrolet	16	Eat 1350	SFd	..	7.47–12.9	Chevrolet	C6IHV	512	836	Co	TD	63	7 1/16 x3x .47	CT f

▲ Includes cab. ● Rear only; Front 11.00/24. ♦ Auxiliary transmission. Spicer 8031. △ Rear only; Front 12.00/24. §—Hydraulic Coupling. ‡—Chassis Weights on Duals Front, Center and Rear. ■ 6231 Spicer Auxiliary Transmission
▼ Special W.Bs. available on request. 8031F-G Spicer Auxiliary Transmission Available.



FEDERALS HAVE WON . . .

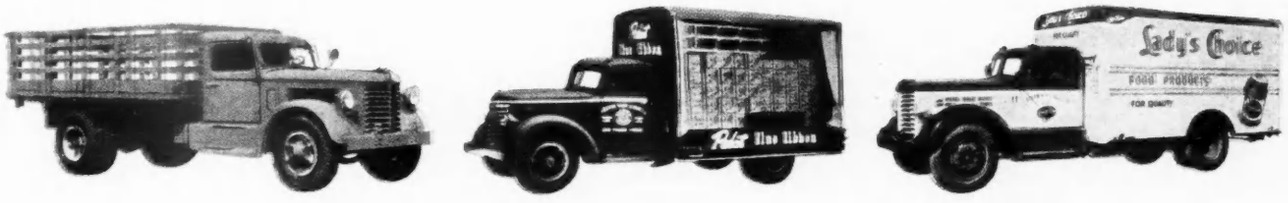
By Costing Less to Run!

● For 38 years Federal has been building trucks that have enjoyed an outstanding reputation for ruggedness, dependability, low upkeep cost, long life and bed-rock operating economy.

Men in a position to judge—fleet owners, maintenance superintendents, service mechanics, dispatchers and drivers—have learned by keeping comparative cost records, checking lay-up time, servicing and running costs that Federal Trucks have those qualities of endurance, economy and rugged all-truck performance that insure owner satisfaction.

That's why so many truck users now say: "Toss the Tough Jobs to Federal."

FEDERAL MOTOR TRUCK CO. • DETROIT 9, MICHIGAN



FEDERAL TRUCKS

Since 1910 . . . Known in Every Country—Sold on Every Continent

This and other Kelite plants constitute the largest, most modern facilities in America for the manufacture of scientific industrial cleaning materials.

Yes, Satisfied Customers Built This Splendid Plant

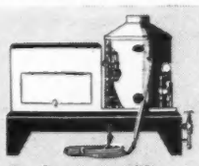
The Kelite Service Engineer

Through helpful, capable service and modern, scientific products—he will demonstrate the key to Kelite success.

Like most American enterprises, Kelite started from scratch ...just 12 years ago!

Today, little businesses and big businesses... by the thousands and thousands...know that the key to scientific cleaning is represented by the bright green Kelite label. They know every Kelite product is reliable...efficient.

In this splendid new plant (and in other Kelite plants here and overseas) a new standard of cleaning efficiency is used—Kelite pH Control.



Tivit Steam Cleaner

Cleans twice as fast as others! Simple... trouble-free... low-cost... made and guaranteed by Kelite.

It Is The Results achieved through pH Control that have led thousands of users to select Kelite... have made it possible for Kelite to build unsurpassed facilities *for serving you!*

During the War it was known as "a barrel of man-hours." Today every Kelite barrel, drum or carboy is helping business achieve greater efficiency and economy.

Manufacturing Plants in Los Angeles, Chicago, Dallas, Australia
Offices in principal cities

Advanced Industrial Chemicals

for Aircraft, Automotive, Agricultural, Beverage, Food, Marine, Metal Finishing, Petroleum, Railroad, and other industries.

"KELITE" REG. U.S. PAT. OFF. • pH CHART COPYRIGHTED 1942 BY KELITE PRODUCTS, INC.

KELITE

SCIENTIFIC CLEANING THROUGH pH CONTROL

Grandpappy of today's Autocar trucks is this single-cylinder, air-cooled three wheeler, now 50 years old. Its designer, Louis S. Clarke stands near by. He was former Autocar president

Off-Highway Tire Data

A detailed formula for cutting ton mile tire costs and wringing extra mileage from heavy duty casings is being offered to the users of off-the-road trucks, tractors and earth-moving equipment.

The "rules" on use and maintenance of these giant, over-size tubes and casings—some of them containing a ton of rubber in a single tire—are set forth in a 40-page manual published by the Tire Division of The Rubber Manufacturers Association.

Illustrated with both halftone cuts and cartoon style pictures of the enemies of long tire service, the manual goes into every aspect of tire use and care in a field where operating conditions and techniques differ completely from those applicable to over-the-road highway equipment. Factors contributing to unnecessary tire wear and premature failure are detailed for all fields of operations. "On the Job," "On the Haul Road," "On the Highway," and "In Storage."

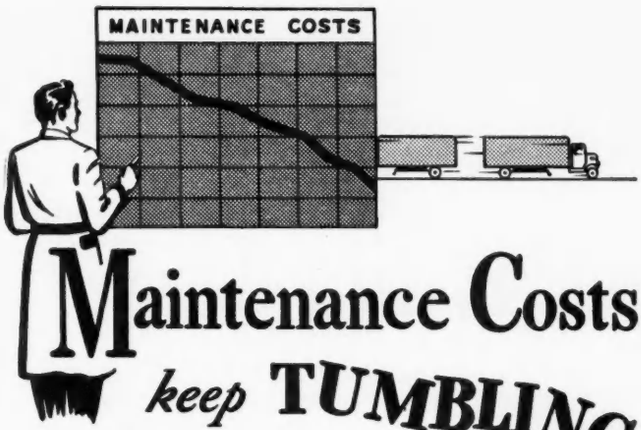
Seven pages are devoted to tables setting forth proper loads and inflations for all of the tires used in earth-moving and logging services.

Free reprints of sections of the manual are being made available to the operators of off-the-road equipment through their dealers.

"I'd be glad to give you the raise your wife is demanding, Hoag, but *my* wife *won't let me.*"

Watch for COMMERCIAL CAR JOURNAL's April Issue

– The Fleet Operator's Reference Annual –



Maintenance Costs *keep* TUMBLING *as Kinghams keep rolling along*

It's simple arithmetic . . . with extra wear and less repair . . . average annual maintenance *and* operating costs are much lower for Kingham Fleet Operators.

Kingham Trailers are tough and rugged, they stand up under hard usage because they are designed and built for extra duty . . . for longer wear.

Rollin' along day in and day out at full load is the *only* way to minimize maintenance cost and Kingham Trailers are doing just that.

Kingham builds every known standard type of Trailer in common use today as well as custom built models for specific requirements. Write for location of your nearest Kingham dealer.

A load behind is a trip ahead

Kingham UNIVERSAL Trailers

NATIONAL SALES . NATIONAL SERVICE

KINGHAM TRAILER COMPANY
INCORPORATED
LOUISVILLE, KENTUCKY

CCJ NEWSCAST

Miller to New Post

F. A. Miller has been named head of the newly formed Department of Marketing and Merchandising of Raybestos-Manhatten, Inc., with offices at 120 Broadway, New York, N. Y. Mr. Miller was recently sales manager for Greyrock products of the corporation's U. S. Asbestos Division.

FACTORY BRIEFS

Chevrolet Motor Division officially opened its new postwar assembly plant at Los Angeles last month. Like the Flint, Mich., plant, which was added to the company's operations last June, the Los Angeles facility features "suspended assembly" of automobiles among other novel industrial installations. At one-shift capacity, the Los Angeles plant will build 35 passenger cars and 15 trucks an hour, boosting Chevrolet's national daily output above the 5,000 vehicle mark. It will serve the retail market in Southern California and a small area in states immediately adjacent.

Dedication of the new Portland, Ore., plant of the Willard Storage Battery Co. was celebrated last month. Employing the most up-to-date ideas in factory construction, the new structure was built and equipped at a cost of approximately $1,000,000. It contains 54,000 sq ft of manufacturing space on a six-acre site and, like the recently dedicated Willard plant in Memphis, has a capacity of 250,000 batteries a year.

The Andrews Mfg. Co., St. Louis automotive cables and electrical products), has moved its office from 6315 Maple Ave. to Chouteau and Theresa Avenues. The old quarters are being retained, and combined space now about treble the old capacity.

The name of the Standard Oil Co. of New Jersey has been changed to the Esso Standard Oil Co. The change was made to give formal recognition to the close association which has developed in the public's mind over a period of years between the corporate name of the company and its Esso trade-mark.

DATES & DOINGS

APRIL 13-16—18th Annual Safety Convention of the Greater New York Safety Council, in the Hotel Pennsylvania, New York City.

APRIL 23-24—Indiana Motor Truck Assn. Sprng Safety & Customer Relations, Claypool Hotel, Indianapolis, Ind.

APRIL 24—Illinois Motor Truck Operator's Assn. annual banquet, Palmer House, Chicago, Ill.

MAY 6-7—National Highway Users Conference, Highway Transportation Congress, Mayflower Hotel, Washington, D. C.

MAY 6-8—Washington Motor Transport Assn. convention, Davenport Hotel, Spokane, Wash.

MAY 10-14—ATA Spring Meeting (Sessions of the Safety and Operations, Equipment and Maintenance and Freight Claims Sections) Statler Hotel, Detroit, Mich.

MAY 16-18—Texas Motor Transport. Assn. 14th Annual Convention, Blackstone Hotel, Austin, Texas.

MAY 21-22—Associated Motor Carriers of South Dakota convention, Alonzo Ward Hotel, Aberdeen, S. D.

JUNE 6-11—Society of Automotive Engineers Summer Meeting, French Lick Springs, Indiana.

JUNE 10—Central Motor Freight Assn. Annual Convention, Palmer House, Chicago, Ill.

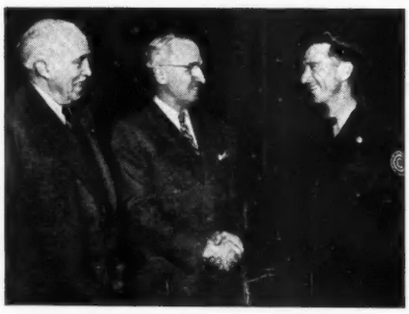
JUNE 11-12—Pennsylvania Motor Truck Assn. annual meeting, Penn Harris Hotel, Harrisburg, Pa.

JUNE 26-27—Maine Motor Vehicle Assn. Annual Convention, Rangeley-Sheraton, Rangeley, Maine.

JULY 16-24—Road Show, American Road Builders' Assn., Soldier Field, Chicago, Ill.

OCT. 8-13—American Trucking Assns. annual convention, Hotels Statler and Mayflower, Washington, D. C.

Driver of the Year



President Truman, accompanied by Maj-Gen. Philip B. Fleming (left) greets Driver of the Year Verl Langford. The White House visit climaxed Langford's expense-paid trip to Washington as guest of ATA. While there he also received the Bantam Supercargo trophy and a $600 radio presented by American Bantam Car Co. Langford is a driver for Eveready Freight Service, Buena Vista, Col.

. . . H. C. KEPNER (center), president of Hoof Products Co. welcomes his son HUGH at left and A. C. HOOF, JR., son of the founder, as new members of the sales department.

HOTVEDT JOINS CCJ STAFF

Burt Hotvedt, former sales promotion manager of Blackhawk Mfg. Co., has joined the Chicago office of COMMERCIAL CAR JOURNAL succeeding the late F. O. Kirkpatrick as business representative.

BENDIX SERVICE SCHOOLS

Service sales representatives of the Bendix Products division, Bendix Aviation Corp., from many states are attending a school on service and maintenance of vacuum power equipment at the South Bend plant.

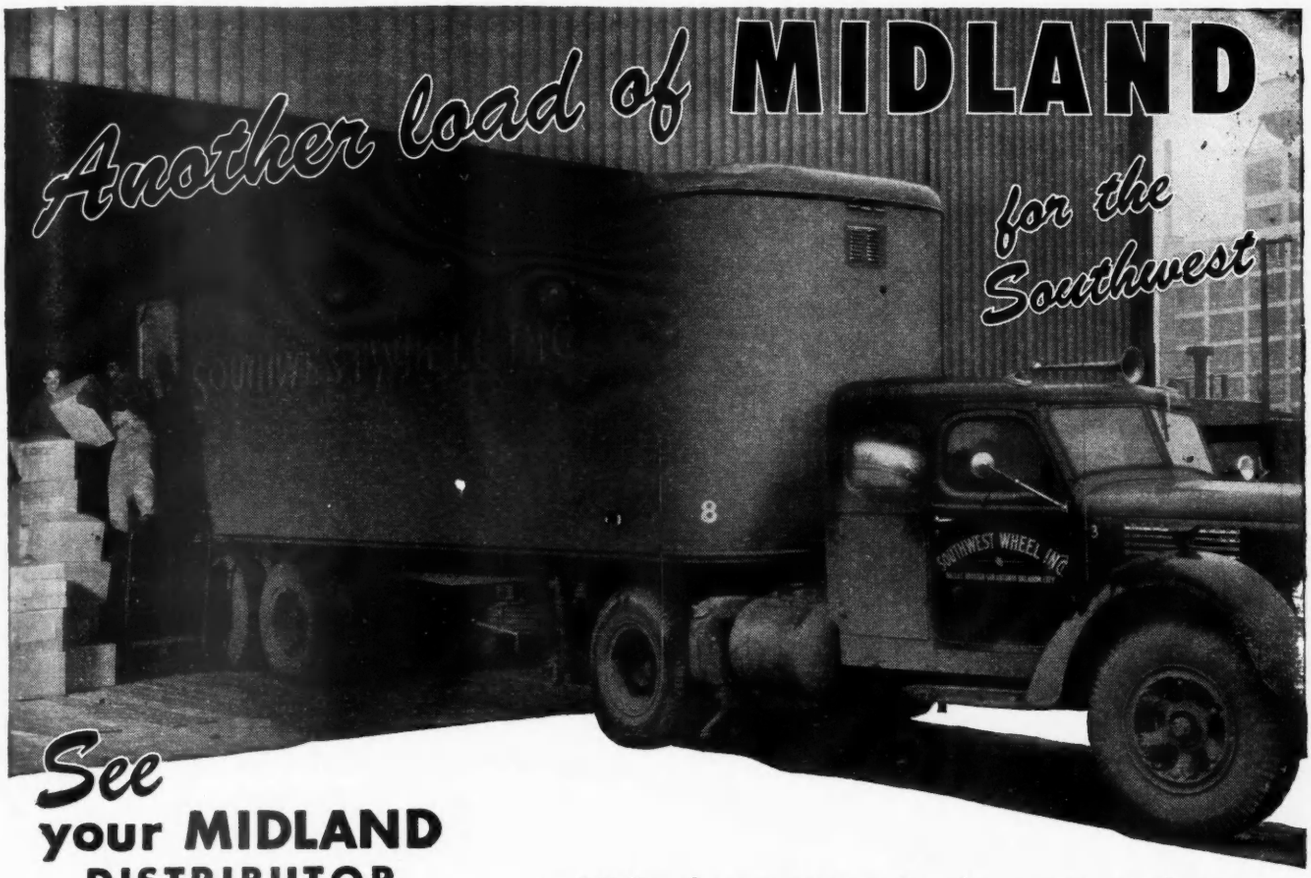
These men have started special service schools at major distributing points throughout their territories. The schools will be attended by mechanics from the service departments of Bendix distributors and dealers, who will study factory methods of servicing vacuum power equipment. School facilities at the home office have been greatly expanded for the special training of these instructors.

BOSS-LINCO SAFETY AWARDS

Thirty drivers of Boss-Linco Lines, Buffalo, have been awarded safety award buttons for no accident records during 1947. Their accumulated years of safe driving, according to Safety & Personnel Director F. S. Platzer, totals 52 years. All of these drivers shared in a safe driving cash bonus amounting to more than $1200.

FORD SERVICE MANAGER

JAMES E. CAMPBELL is service manager of Ford Motor Co.'s Northwest Region VICTOR R. BELL succeeds him as service manager at Edgewater, N. J., and DAVID J. LONG has been named district truck representative at Edgewater.



See your MIDLAND DISTRIBUTOR for

POWER BRAKES in AIR or VACUUM
BUS DOOR EQUIPMENT
2-SPEED AXLE CONTROLS
INDUSTRIAL CHAMBERS AND VALVES
HYPOWER UNITS for TRUCK and BUS
TRUCK and BUS AIR BRAKES
LOCOMOTIVE CRANE CONTROLS
INDUSTRIAL CRANE and SHOVEL CONTROLS
SLACK ADJUSTERS

• Midland acceptance in the great southwest necessitates a constant flow of parts and products from the great Midland factories. And this typifies the demand for Midland from *all* sections of the country,

This evidence of superiority and service recommends Midland to you. Consult the list of products at the left—then see your nearest Midland Distributor about your needs. Or write, phone or wire direct to us in Detroit.

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Export Department: 38 Pearl Street, New York, N. Y.

MIDLAND
POWER BRAKES

CCJ Newscast

(CONTINUED FROM PAGE 104)

TIRE OUTPUT SETS RECORD

Production and shipments of automotive casings in the year 1947 surpassed any previous year in the history of the industry. Production of 95,548,391 casings in the year topped by 13,250,210 units the production figures for 1946 which was in itself a record year, The Rubber Manufacturers' Association has announced. Shipments during the year totalled 91,194,274 casings, an increase of almost 11 per cent over the previous year.

Production of truck and bus casings in 1947 amounted to 17,757,981 units, as compared with 15,831,862 units in 1946. Shipments in 1947 were 17,077,473, an increase of over 7 per cent above 1946.

'47 LOADINGS SET RECORD

Predictions that the volume of freight transported by motor carriers during 1947 would exceed any previous year's volume were borne out by full-year figures compiled and made public today by the Department of Research, American Trucking Associations, Inc.

The Department announced the index figure, based on the average monthly tonnage of the reporting carriers for the three years from 1938 through 1940, stood at 206, an all-time record. It compared with an index of 184 in 1946 and the previous record of 186 in the war-time year of 1943.

The volume of freight transported by motor carriers in December increased 2.5 per cent over November and 11.3 per cent over December, 1946, bringing the index figure to 216 for December, 1947.

COL. HORNER RESIGNS

Col. Frederick C. Horner has resigned his position as director of the Field Operations Section of the Distribution Staff of General Motors Corp. in Detroit. He will return to New York to set up an office of his own.

Col. Horner was the organizer and president of the Baltimore Motor Haulage Co. which operated in Baltimore and vicinity. Early in 1917, as a civilian, he was given charge of Motor Transport operations at Langley Field Aviation Experimental Center, Langley Field, Va. He served overseas with the American Expeditionary Forces in France from June, 1918, to July, 1919. On returning home he became affiliated with the Packard Motor Car Co. of New York as transportation engineer. He went abroad in 1921 and spent two years on his own studying motor transport operations in England and Continental Europe.

He became affiliated with General Motors in 1923 as assistant to Alfred P. Sloan, Jr., then operating vice president. Later he organized and became manager of the Railroad Service Dept. and in 1937, assistant to Mr. Sloan, Chairman of the Board. Shortly after Pearl Harbor, he rejoined the Army to organize and operate the Highway Division, Transportation Corps, Army Service Forces, and was placed on inactive duty in the autumn of 1945.

From February to September, 1945, he was consultant to the War Production Board on highway transportation problems and returned to General Motors in October, 1945, as director of the Field Operations Section, Distribution Staff.

HOMETOWN NOTES

Denver: The Winter-Weiss Co., 2201 Blake St., have been appointed distributors for Supercargo Truck Trailers manufactured by American Bantam Car Co.

Harrisburg: Kay Distributing Co., 667 Foster St., has been named distributor for American Bantam Car Co., manufacturers of Supercargo Truck Trailers.

Newark, N. J.: Transportation Equipment Co., Inc., 35 Van Buren St., has been named distributors for hydraulic hoists and bodies made by Daybrook Hydraulic Corp.

Oakland, Cal.: A new International Harvester Co. sales and service branch at 2855 Cypress St.

(TURN TO PAGE 110, PLEASE)

"Look at truck No. 7—mostly idle yesterday!"
A Startling Fact About Running Time
—that only a Servis Recorder can reveal:
Many trucks that seem busy, STAND IDLE actually longer than they work, during the day!
The truck looks busy. It seems to be working all the time. It starts the day right—leaves the garage on time—gets its morning load promptly. The driver seems to be a faithful and conscientious worker. Apparently the truck puts in a full day's work.
And yet—
If a SERVIS RECORDER is installed on that truck, and the boss looks at its chart the next morning, he finds out plenty—
—there were two long stops during the morning that the route didn't justify
—moreover, the truck actually stood idle from 2 to 4 o'clock for some mysterious reason!
—as a consequence, it didn't check in for the day until nearly 7 o'clock—thus expensive OVERTIME.
The Chart that Tells the Story
Here's a Stop of 2 Hours
POINTS OUT ALL DELAYS
Write for our helpful booklet—"Ten Ways of Getting More Work Out of Motor Trucks". It's free.
THE SERVICE RECORDER COMPANY
1375 Euclid Avenue Cleveland 15, Ohio
The Servis Recorder
Tells Every Move Your Truck Makes

AND THEY'RE SWITCHING TO IT FAST!

BENIUM* *Heat-resisting material is the secret ingredient developed by the Marshall-Eclipse Division of Bendix and used exclusively in Eclipse brake linings and heavy-duty brake blocks.*

The secret is out! The secret of longer brake block life, and safer, surer stopping is Benium*, the new formulation that is working wonders for its users. Already operators are showing remarkable savings, and expressing their enthusiasm for Eclipse Brake Blocks with this exclusive ingredient. If you want longer block life and its attendant savings, see your jobber about Eclipse Brake Blocks.

Eclipse Brake Blocks

A PRODUCT OF Bendix

Greatest Name in Braking!

MARSHALL-ECLIPSE DIVISION OF TROY, NEW YORK

Bendix AVIATION CORPORATION

. . . JOHN H. LANE and ROBERT S. JAMES as special truck representatives for The Studebaker Corp. in Cincinnati and Louisville respectively.

. . . FRNK W. SEIVERT as advertising manager for the Kellogg Division of the American Brake Shoe Co., of New York.

. . . A. N. MORTON and A. C. FETZER, elected vice presidents of Mack Trucks, Inc., of New York.

. . . RENE CAZENAVE, San Francisco newspaperman, as director of the newl created Public Relations Department of The Truck Owners Association of California.

. . . ARTHUR D. WHITMER as superintendent of Studebaker's new truck assembly division.

. . . ARTHUR J. WIELAND, elected to the newly-created post of executive vice-president by the board of directors of Willys-Overland Motors.

. . . GORDON Z. SPENCER as director of jobber sales and service and RUSSELL S. GARNICK as merchandising manager, Trico Products Corp.

. . . SCOTT M. KENNEDY as assistant sales manager, and JAMES L. WOODHEAD as dstrict manager, Maremont Automotive Products Co., Inc.

. . . CHARLES S. MUNSON, former president of Air Reduction Co., Inc., as chairman of the executive committee. JOHN A. HILL becomes the fifth president of the company.

. . . R. R. ROLPH as sales manager of the automotive division of Monroe Auto Equipment Co. He was formerly with Borg-Warner

. . . L. B. LILLIE as merchandise manager in charge of truck tires, retread and repair materials for the Fisk tires division of United States Rubber Co.

. . . The following district managers, newly-appointed by Mack Trucks, Inc.: C. E. COLE at Los Angeles, LAWRENCE D. McLEAN at Reading, Pa., T. H. JONES at Charlotte, N. C., and WILLIAM DUDDE at Bronx, New York.

. . . The following new Black & Decker branch managers: Mr. G. M. BUCHANAN at Charlotte, N. C.; J. P. SPAIN at Baltimore; and ARTHUR S. BOEHM at San Francisco.

. . . CHARLES D. MORGAN of New York as president of the National Furniture Warehousemen's Association.

. . . E. R. ROWLAND, as Autocar branch manager in Charlotte, N. C. He was formerly in charge of Tampa branch.

. . . WM. B. TIERNEY, as assistant sales manager of the wholesale division of White Motor Co. He was former Wilkes Barre branch manager

Quickest, easiest way to

SAFELY REPAIR TUBES

USED BY OVER 100,000 SERVICE STATIONS

Cash in with DILLECTRIC *Service*

ONLY DILLECTRIC HAS ALL THESE ADVANTAGES

- **HANDY** — Patch and Valve Stem Units come ready-prepared. No waste — easy to inventory.
- **AUTOMATIC** — Automatic shut-off controls time and temperature of vulcanization. No guessing.
- **STRONGER REPAIRS** — Fills, reinforces, vulcanizes the tube injury completely safe. No failures in service.
- **FASTER** — Complete repair in quickest possible time for perfect vulcanization.
- **COMPLETE** — Handles all types of repairs in all tubes — synthetic or natural rubber.
- **LOW-COST REPAIRS**—Dillectric Patch Units cost less.

Ask any leading tire company, oil company or automotive jobber.

★ Recommended and approved by all leading tire and oil companies.

★ Safe — carries the seal of approval of the Underwriters' Laboratories.

Send a postal card for full information

THE DILL MANUFACTURING CO.

700 East 82nd St. CLEVELAND 8, OHIO

Branch—1011 S. Flower St. Los Angeles 15, Calif.

DILLECTRIC
REG. U. S. PAT. OFF.
Electrically VULCANIZED TUBE REPAIRS

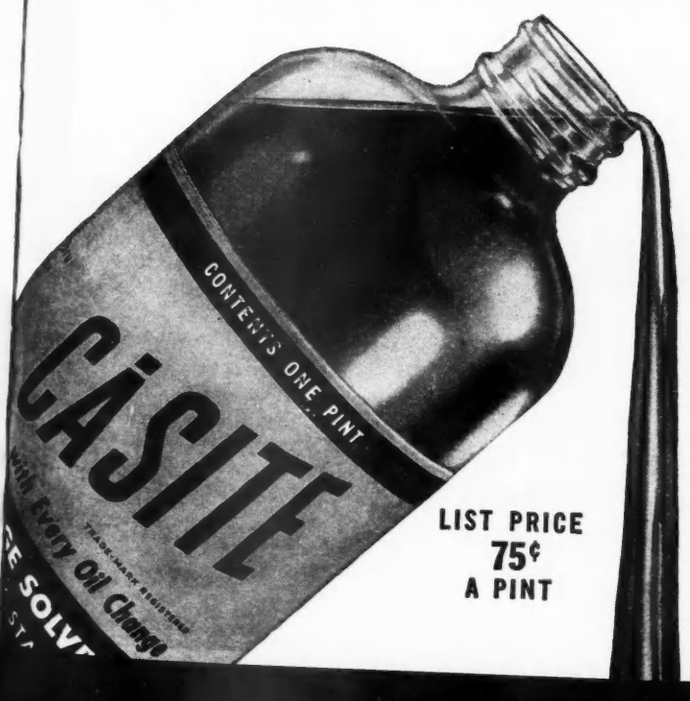
What's Extra Protection Worth to You?

● You get more miles from your equipment, more life from each engine, with Casite's extra protection.

Casite cuts engine wear because it improves lubrication—gets oil around quickly and into the tight spots. Casite retards formation of sludge and gum . . . frees sticking valves and rings . . . keeps motors clean and free-running.

All engines run better and last longer with Casite in the crankcase—no matter what kind of motor oil used. Tune up your old engines, break in your new ones, with Casite—for *extra* protection.

THE CASITE CORPORATION
HASTINGS, MICHIGAN



LIST PRICE 75¢ A PINT

Improves Lubrication
Cuts Engine Wear

CCJ Newscast

(CONTINUED FROM PAGE 106)

CHEVROLETS TRANSFERS

Nine promotions and transfers of Chevrolet wholesale sales personnel to positions as assistant regional manager of zone manager were announced here by T. H. Keating, general sales manager, Chevrolet Motor Division.

Promoted from zone manager to assistant regional manager were Warren R. Peel and George P. Barry. Peel goes from zone manager at Cleveland to assistant regional manager of the Midwest Region, with headquarters in Kansas City. Barry has been zone manager at Chicago. He has been appointed assistant regional manager of the Pacific Coast region at Oakland, Cal.

L. F. Vollmer has been transferred as assistant regional manager from the Pacific Coast to the Flint region.

R. P. Murphy has been transferred from zone manager in Pittsburgh to the corresponding post in New York. F. E. Byers, city manager at Pittsburgh, has been promoted to zone manager at the same point.

F. D. McKitrick, zone manager at Memphis, Tenn., has been transferred to zone manager at Chicago. R. B. Johnson, city manager at Chicago has been appointed zone manager at Cleveland.

J. W. Steele has been promoted from city manager at Los Angeles to zone manager at Portland, Ore. R. B. Lyman has been promoted from city manager at Seattle to zone manager at Memphis, Tenn.

(TURN TO PAGE 172, PLEASE)

1947 Domestic Motor Truck Factory Sales by Gross Vehicle Weight*

	5,000 & Less	5,001-10,000	10,001-14,000	14,001-16,000	16,001-19,500	19,501-26,000	Over 26,000	Total
January	25,578	11,103	17,361	15,746	3,259	2,313	2,074	77,434
February	26,051	13,076	19,170	18,150	2,316	2,579	1,934	83,276
March	27,268	16,852	19,356	20,232	3,062	3,254	2,056	92,082
April	24,487	15,978	18,953	14,885	2,582	2,360	2,270	83,515
May	23,532	14,091	17,474	13,028	2,577	2,950	2,044	75,696
June	21,924	10,809	16,303	16,462	2,928	2,837	2,350	73,613
July	22,679	12,868	16,452	19,294	2,305	3,069	1,777	78,444
August	20,217	9,746	13,977	15,592	2,216	2,968	1,666	66,382
September	31,901	16,326	18,012	15,448	2,803	3,359	1,875	89,724
October	36,538	16,368	15,396	16,781	2,312	3,909	2,003	94,307
November	25,470	12,856	11,813	13,913	2,498	2,958	1,653	71,161
December	29,017	15,634	13,006	19,174	3,802	3,167	2,171	85,971
12 Months	314,662	165,707	197,275	198,705	34,660	36,723	23,873	971,605

1947 Truck Trailer Production*

Vans:	December	12 Months
Insulated and refrigerated	82	1,853
Furniture	25	998
All other closed top	1,343	18,783
Open top	80	1,617
Total Vans	1,530	23,251
Platforms:		
With cattle and stake racks	167	3,317
With grain bodies	59	1,255
All other	426	7,871
Total Platform	652	12,443
Tanks:		
Petroleum	372	2,437
All other	33	865
Total Tanks	405	3,302
Pole and Logging:		
Single axle	157	4,103
Tandem axle	103	1,545
Total	260	5,648
Low-bed heavy haulers	130	2,418
Off-highway	14	808
Dump trailers	15	617
All other trailers	113	1,464
Total Trailers	3,119	49,951
Chassis for trailers	166	3,301
Total Trailers and Chassis	3,285	53,252

* Data from Industry Division, Bureau of the Census.

Wayne Features
FOR HIGHER EFFICIENCY
REMOVABLE CYLINDER BLOCK
TIMKEN MAIN BEARINGS WITH EXTERNAL ADJUSTMENT
CAN'T OVERFILL
REMOVABLE CRANK CASE
Greater
ACCESSIBILITY
WAYNE Air Compressors provide more air at the right pressure, at lower cost. They're backed by a Nation-wide Service Organization. Write for catalog.
THE WAYNE PUMP CO.
FORT WAYNE, INDIANA
Wayne
Wayne Honest Measure
for your protection
AIR COMPRESSORS
GASOLINE PUMPS - CAR WASHERS - AIR SCALES - HOSE REELS - AUTO LIFTS

FIRST among the "HEAVYWEIGHTS"

The country over, truck operators whose business calls for heavy duty trucks give the call to GMC. And with good reason! GMCs are first among the "heavyweights." They lead the field in heavy duty design, structure and mechanical advancements. Over the years they have introduced many of the features now common to all heavy duty trucks. The GMC heavy duty line today offers a wide variety of chassis in weight ratings of 19,000 to 90,000 pounds . . . four gasoline and two Diesel engines . . . equipment options that provide vehicles exactly tailored to the needs of every job. And many GMC heavy duty models are now available for quick delivery.

GMC TRUCK & COACH DIVISION • GENERAL MOTORS CORPORATION

Heavy duty models for every operation. . . gasoline and Diesel, standard and cab-over-engine, trucks and truck tractors.

Strongest, sturdiest chassis GMC has ever built . . . rugged, truck-designed axles, transmissions, clutches, brakes, frames, springs.

•

Powerful, dependable GMC-built valve-in-head gasoline engines of the same basic design as the famous GMC "Army Workhorse" . . . four heavy duty sizes.

•

Exclusively designed and engineered Diesel chassis with many specialized features . . . exclusive, famous GM 2-cycle Diesel engines in two power ranges.

THE TRUCK OF VALUE

GMC TRUCKS

GASOLINE • DIESEL

Help America Produce for Peace . . . Turn In Your Old Scrap Iron and Steel

Use postage-paid card inserted at page 57 for free information on advertised products

143,000 Miles

(CONTINUED FROM PAGE 40)

marks and that these were caused by the play in the back gears. This lost motion is inherent in straight-cut backgears and cannot be eliminated. Under most all lathe jobs requiring the use of back gears it is either not present or not objectionable because of the different type of cutting tool and the constant pull against the turn of the lathe itself.

But with the grinder it was different. We solved this problem completely by installing a separate motor on the back of the lathe with a built-in worm-type gear reduction, using a 4-in. belt pulley. In order to change motors it is only necessary to drop the belt off the regular drive and slip the grinder belt on, an operation that requires but a couple of minutes.

The grinder itself is hinged to the back of the lathe and held up against the work with a coil spring. The grinding wheel is a cup type and is independently driven by its own motor.

Our method of removing the kinks we have found in many crankshafts is simple and effective. We first chuck up the crankshaft in the lathe, chucking one end in an independent chuck and the other end supported by the lathe center. We then check the run-out of the crankshaft by using a dial indicator micrometer setup in the tool post of the lathe and resting on the main bearing journal.

After the crankshaft is centered properly in the lathe, any runout on a main journal can be easily measured.

Our usual method of removing a kink is to establish which way the shaft should be bent by use of the dial indicator, then stop the shaft with the high point on the bottom. Here we insert a small hydraulic jack supported from the bottom by a piece of steel resting on the cross members of the lathe bed, and then apply the pressure carefully, making frequent measurements. A little practice will soon make it comparatively easy to spring the shaft the right amount in order to allow it to spring back normally in a straight plane.

In some cases we use a bar and a steel block in a similar manner and accomplish the same results.

After all main journals are running true to within .002 or less, we are ready to begin our grinding.

A shaft rebuilt in this manner, plus line-bored main bearings, trued connecting rods, and precision fitting throughout, will give maximum service—it will give service beyond our 150,000-mile goal.

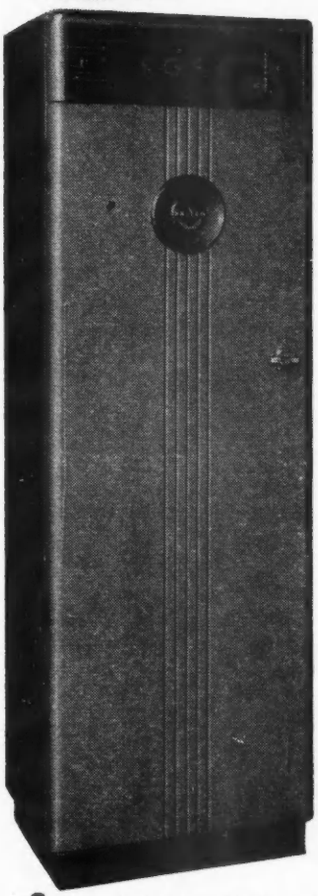
All Engines Identified

OUR rebuilt engines are painted and given a number. This number remains with it and becomes a part of the record of the truck in which it is installed. Should it become necessary in the future to ascertain what was done and exactly who did the work, we can easily refer to that number and find all of its past history. This is an advantage. If an engine does an exceptionally good job we want to know what we did and who did it and if it fails to deliver we want to have the same details. This engine record also gives

(TURN TO PAGE 114, PLEASE)

SAVE TIME, and TIRES
BEFORE mounting tires, spread E-Z OFF on rim and bead with a brush. Assures easy removal later.
BISHMAN E-Z-OFF RIM PROTECTIVE COMPOUND
For HEAVY DUTY TRUCK and BUS RIMS
PREVENTS RUST, CORROSION and "FREEZING" of tires to rims. It seals against water seepage between tire and rim. Acts as a continual lubricant, protects flap and tube from pinching or chafing.
SAFE, DEPENDABLE, ECONOMICAL!
Absolutely harmless to tires or tubes. Does not affect rubber—natural or synthetic. Will not cause tire to creep on the rim. COSTS ONLY a few pennies per rim treatment and saves MANY TIMES its cost in time, labor, tire mileage and rim life. EVEN BADLY RUSTED OLD RIMS—after the E-Z OFF Treatment—can be used without fear of sticking to the tires. E-Z OFF Compound loosens up rust scales for easy removal by tapping rim with hammer.
BISHMAN
E-Z OFF
RIM PROTECTIVE COMPOUND
Sold on MONEY-BACK GUARANTEE
Purchase price refunded if not satisfied.
ASK YOUR JOBBER or WRITE US
BISHMAN MFG. CO., OSSEO 4, MINN.
BISHMAN

Check ✓ these specifications for 152-162 Mc-FM Radiophone Communication Systems



by PHILCO the leader

• specifications

	152-162 Megacycles
Dimensions	8¼x12x19¼"
Sensitivity	0-.5 microvolts for full audio output
Selectivity	Band width 40KC at 6 Db down. Adjacent channel (60KC) —60 Db minimum. Alternate channel (120KC) —106 Db minimum.
Spurious response	—60 Db minimum.
Squelch	0.3 microvolts minimum 6.0 microvolts maximum
Power supply	Synchronous vibrator
Frequency range	152-162 megacycles
Modulation characteristics	±20KC at 3,000 cycles equal 100%
Frequency stability	±.005%
Spurious emission	—60 Db minimum
Power supply	Dynamotor
Antenna relay	Built-in for transmit-receive operation
Temperature range for normal operation	—30° C to 60° C

- Philco Radiophone Systems are Available for Operation on All Frequencies Assigned for Mobile Communication.
- Free Engineering Consultation Service.
- Nationwide Service Organization.

MAIL COUPON TODAY FOR FULL DETAILS ➡

PHILCO

INDUSTRIAL DIVISION

PHILADELPHIA • PENNSYLVANIA

Dept. J-6, Industrial Division
Philco Corporation
C and Tioga Streets
Philadelphia 34, Penna.

Gentlemen:

Please send me information about the new PHILCO FM Radiophone Communication System.

NAME_____

ADDRESS_____

CITY_____

143,000 Miles

(CONTINUED FROM PAGE 112)

all important sizes which have been fitted, such as over sizes on pistons, connecting rods and main bearings.

Valves Hard-Faced

ON models that do not already have them, we are installing hard-faced valves on all our Chevrolet and Dodge engines on the exhaust and have sodium cooled valves on our K-10 and K-11 Internationals and on our Whites. By changing caps and keepers we are able to use sodium cooled valves in our Whites on our K-10 Internationals. We send our valves out for hard-finishing treatment and the concern doing the work refinishes the stems and adds to their length so they can be finished on the tappet ends for the adjustment on other than overhead valve motors such as the White.

Our handling of the valve situation as enumerated has virtually eliminated all the valve problems we have been having. We give some credit, of course, to the overhead oiler.

Compression Key to Rebuild

WE have been asked how we determine when it is time to rebuild an engine. The commonly accepted method is to rebuild an engine when it starts using too much oil. This can easily become an error in diagnosis. We had a new Dodge which at the end of eight months used six quarts of oil between Springfield and Kansas City. An overhead oiler and subsequently more adequate lubrication of valves and the top ring reduced the oil consumption to one quart for the same trip.

While in most cases excessive oil consumption is an indication of ring wear and a rebuild might as well be had at re-ring time, it is not always the case.

Actually we determine what to do with an engine generally from compression testing. We test compressions on all our units each five days. These compression readings are recorded.

When testing a motor thought to need an engine rebuild we made at least six different checks on a hot motor before relying entirely on the readings. We have found that a compression reading will vary and that sometimes an engine showing low compression in one cylinder may have a piece of carbon under a valve which is dislodged before the next reading five days hence.

A motor that really needs overhauling and rebuilding will consistently show excessively low compression readings every time it is checked and nothing will bring it up except a rebuild.

Care-free miles are miles that cost less money. Service costs the company money. If we can make a generator stay on an engine and and give full service for a year when formerly it had to be removed at least four times during that period, we are making progress.

That is the end result we are seeking, knowing full well that service cannot be entirely eliminated but that the average owner does not get all the service built into his engine.

(TURN TO PAGE 116, PLEASE)

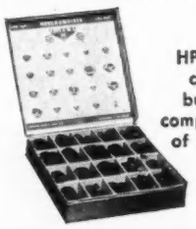
Only Fast-Moving Parts

GO INTO UNITED BRAKE ASSORTMENTS

HPA-200—Two drawer metal cabinet . . . 42 different parts, a total of 286 pieces.

Based on intensive field studies of the hydraulic brake parts that people actually need and buy, the new United Assortments are made up of fast-moving items only. And yet they fill the requirements for all popular makes and models of cars and trucks. Twelve United Assortments provide sizes to meet the needs of shops large and small. Parts can be easily identified and replaced. List prices and car application charts appear prominently for quick reference. Ask your NAPA Jobber about United Assortments and get more brake service business! United Parts Mfg. Co., 1250 W. Van Buren St., Chicago 7.

HHA-462—Brake hose merchandiser . . . 15 types that replace 95% of all hose applications.



HPA-469—Wheel cylinder parts in bulk. 130 pieces, comprising 19 types of cups and boots.

UNITED

HYDRAULIC BRAKE PARTS • BRAKE CABLES

SPEEDOMETER CABLES • FUEL PUMP PARTS

Modern trucks and buses that carry the heavy loads, climb the steep grades, and still make the sustained high speeds required today need *special* gear lubricant. Lubricant that can withstand pressure, heat, cold, and moisture—and keep on doing it. That's a tough job. But Quaker State QUADROLUBE *is* special. Specially formulated, compounded and *stabilized* to do that job better and longer. It's more resistant to foaming, rust and corrosion, too. Gives more protection. Every drop of base oil in Quaker State QUADROLUBE is made solely from pure Pennsylvania grade crude oil —oil you know you can rely on. Try Quaker State QUADROLUBE now in your trucks and buses.

STABILIZED

QUAKER STATE

QUADROLUBE

AND SUPER QUADROLUBE*

*Specially compounded for the lubrication of hypoid gears

QUAKER STATE OIL REFINING CORPORATION • OIL CITY, PENNSYLVANIA

143,000 Miles

(CONTINUED FROM PAGE 114)

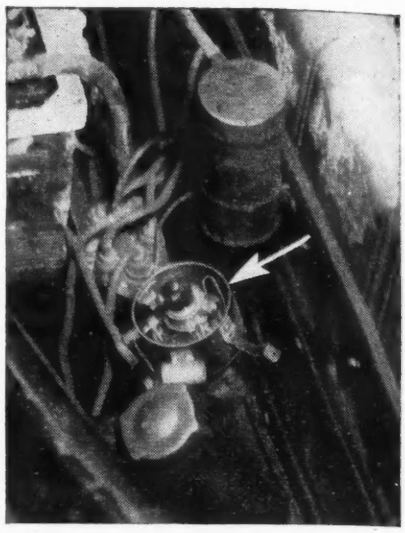
New Products on Trial

TO this end we are usually trying out one or two innovations or new products.

At the present time we are operating a new-type distributor which replaces present points and rotor arrangement. This new device uses an entirely different kind of point requiring service only after 20,000 miles. The plugs will fire through oil, it delivers a hotter spark and points last for more than 150,000 miles. These are some of the claims of the inventors and most of them are being borne out under actual service conditions. We did have trouble with the connections to the points due to their method of fastening them. We soldered these connections and since have had no trouble at all. It is possible after they have been used for a great many thousand miles that we will place them on all of our vehicles.

We maintain a policy of trying out in such a way that it cannot inter-

(TURN TO PAGE 118, PLEASE)



Patented distributor, one of several new products constantly being tested

12-volt, heavy-duty surplus generator, adopted for use on 6-volt system

Tests proved value of overhead oilers, now installed in cabs of all vehicles

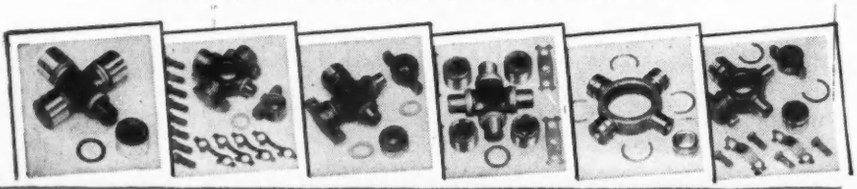
Worth remembering

YOU CAN SERVICE OVER 90% OF AMERICA'S CARS AND TRUCKS WITH

TRADE NEAPCO MARK

UNIVERSAL JOINTS AND PARTS

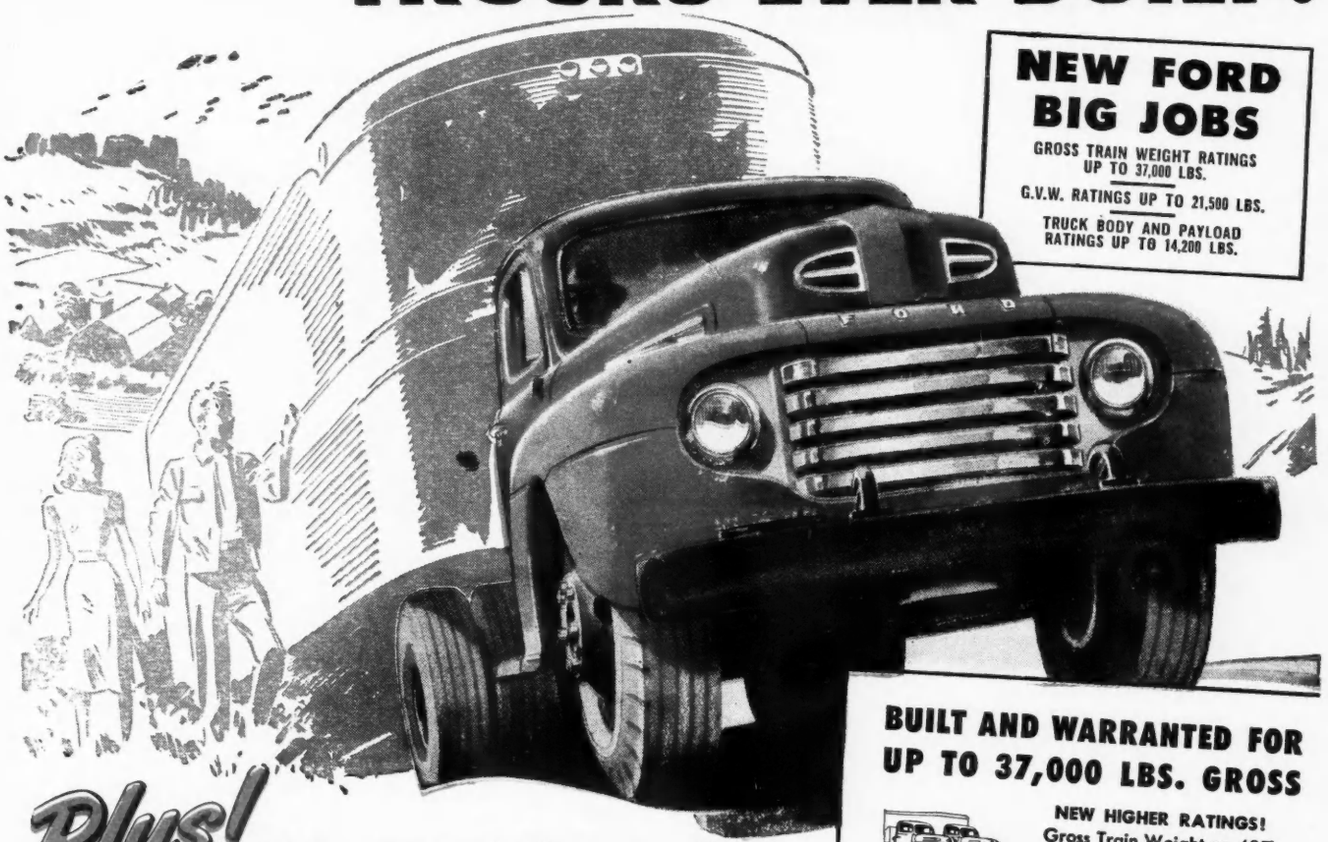
New England Auto Products Corporation, Pottstown, Pennsylvania, U. S. A.



Neapco-Spicer Neapco-Mechanics Neapco-Detroit Neapco-Cleveland Neapco-Ford Neapco-Chevrolet

America's Most Complete Independent Line

Now! BIGGEST FORD TRUCKS EVER BUILT!



NEW FORD BIG JOBS

GROSS TRAIN WEIGHT RATINGS UP TO 37,000 LBS.

G.V.W. RATINGS UP TO 21,500 LBS.

TRUCK BODY AND PAYLOAD RATINGS UP TO 14,200 LBS.

Plus! Hottest new truck line ever offered by the Leader in Trucks Built and Trucks in Use!

They're red-hot! Ford *Bonus** *Built* Trucks for '48 are the hottest trucks in Ford history! Over 139 new models for the widest job coverage ever! Three new engines, a Six and two V-8's! New Million Dollar cab! New BIG JOBS! Dozens of new features, plus the unparalleled know-how of the truck maker who has built more trucks than anyone else, and has more trucks in use today! For 30 consecutive years there have been more Ford Trucks in use than any other make! See your Ford Dealer today!

***BONUS:** *"Something given in addition to what is usual or strictly due."—Webster*

BUILT AND WARRANTED FOR UP TO 37,000 LBS. GROSS

NEW HIGHER RATINGS!
Gross Train Weight up 48%
Gross Vehicle Weight up 42%
Truck Body and Payload up 39%.

Series	Gross Train Weight	Gross Vehicle Weight	Truck: Body and Payload
F-7	32,500 lbs.	19,000 lbs.	12,500 lbs.
F-8	37,000 lbs.	21,500 lbs.	14,200 lbs.

145 HORSEPOWER V-8 TRUCK ENGINE!
45% more horsepower than "239" V-8! 337 cu. in. displacement. 255 lbs-ft. torque at 1800 r.p.m.

UP TO 10.00-20 TIRES!
Single front and dual rear. 9.00-20's available on the F-7 BIG JOB.

NATIONWIDE SERVICE!
Ford BIG JOBS are backed by 6400 service stations—more than are available for any other trucks in this capacity range.

Listen to the Ford Theater, Sunday afternoons, NBC Network. See your newspaper for time and station.

FORD 1948 — *Bonus Built* — TRUCKS 1948

BUILT STRONGER TO LAST LONGER

LIFE INSURANCE EXPERTS PROVE AND CERTIFY . . . FORD TRUCKS LAST UP TO 19.6% LONGER!

143,000 Miles

(CONTINUED FROM PAGE 116)

fere with regular operation, any new device that offers money or service saving possibilities.

Such were the conditions which led to our adoption of an overhead oiler on all of our vehicles. After trying one or two out and keeping records and data on the performance of the unit, we were convinced that the device aided our upper lubrication and saved us service dollars and gave us longer care-free miles.

This brings us up to some changes we made in generator equipment, possible only perhaps, because of the after-war era in which we are living.

We bought some surplus Delco-Remy 13-volt, No. 985 Model, 55 ampere, 900 rpm generators. These cost $155 new and were used by the army on half-tracks and other mobile equipment.

All of our vehicles use six-volt equipment. By disconnecting two of the four field coils we discovered we had a two-brush six-volt generator, easily controlled by our voltage regulators. We did not remove the two disconnected coils but left them in. If one of the coils in use ever burns out we can cut it out and hook up one of the good ones.

We have had some of these outfits running for many thousands of miles with no detectable wear and with perfect commutators. We don't know how long they will run without servicing—a million miles perhaps—we'll settle for any unit that runs a million miles without service but in the meantime, we're hooking our trucks onto a star that reads 150,000 miles.

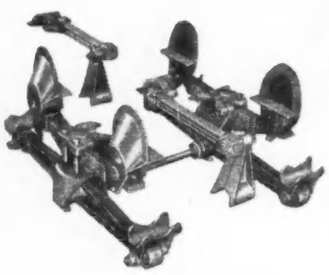
The Frisco Transportation Co. fleet numbers between 300 and 400 units of all sizes. The bulk of our heavy hauling is done with 387-cu. in. Whites and K-10 and K-11 Internationals. We have Fords, Chevrolets, Dodges, Diamond T's, and all are handled on the replacement engine deal. We keep engines rebuilt in stock to replace almost any engine in the fleet.

END

(Please resume your reading on P. 41)

Follow the Leader!

PRICE



. . . low inventory, modern methods, new production facilities, standardization, stock sizes—all tie together to give the lowest cost.

HENDRICKSON TANDEM

SERVICE

. . . we respect this great word "service" and make every effort to live up to our responsibilities of "backing up" every unit that leaves our plant.

HENDRICKSON TANDEM

ACCEPTANCE

TRUCKS—Since 1933 International Harvester Company has standardized on Hendrickson Tandems for their 6-wheel models.

TRAILERS—Hendrickson Tandems are used as standard or optional equipment by over 35 trailer manufacturers.

SPECIAL EQUIPMENT—The adaptability of the Hendrickson Tandem fulfills the unusual requirements of manufacturers of special equipment.

HENDRICKSON MOTOR TRUCK COMPANY

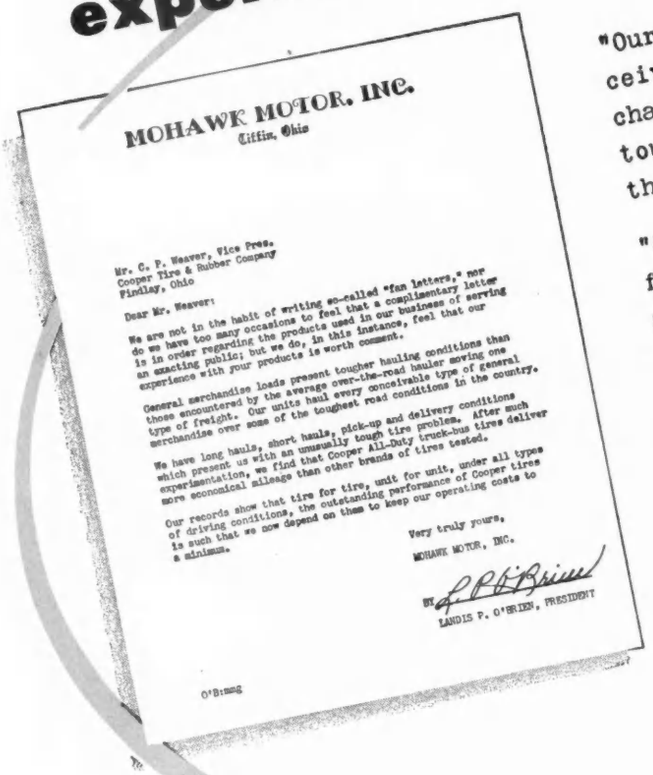
8001 W. 47th Street, Lyons (Chicago Suburb), Illinois

KELLOGG OFFERS FIRM PRICE

Kellogg Division of the American Brake Shoe Co., manufacturer of Kellogg-American air compressors and paint spray equipment, announced that effective Feb. 1, firm prices were established on all products, discontinuing the former policy of "price in effect at time of shipment." The new action will include reductions on some models, price increases on others, with a few models remaining at present levels.

"Ran through a gale on the way up—She'll straighten up goin' back through it!"

profit by the experience of others



MOHAWK MOTOR, INC.
Tiffin, Ohio

Mr. C. P. Weaver, Vice Pres.
Cooper Tire & Rubber Company
Findlay, Ohio

Dear Mr. Weaver:

We are not in the habit of writing so-called "fan letters," nor do we have too many occasions to feel that a complimentary letter is in order regarding the products used in our business of serving an exacting public; but we do, in this instance, feel that our experience with your products is worth comment.

General merchandise loads present tougher hauling conditions than those encountered by the average over-the-road hauler moving one type of freight. Our units haul every conceivable type of general merchandise over some of the toughest road conditions in the country.

We have long hauls, short hauls, pick-up and delivery conditions which present us with an unusually tough tire problem. After much experimentation, we find that Cooper All-Duty truck-bus tires deliver more economical mileage than other brands of tires tested.

Our records show that tire for tire, unit for unit, under all types of driving conditions, the outstanding performance of Cooper tires is such that we now depend on them to keep our operating costs to a minimum.

Very truly yours,
MOHAWK MOTOR, INC.
BY L. P. O'Brien
LANDIS P. O'BRIEN, PRESIDENT

O'B:mmg

"Our units haul every conceivable type of general merchandise over some of the toughest road conditions in the country.

"Our records show that tire for tire, unit for unit, under all kinds of driving conditions, the outstanding performance of Cooper tires is such that we now depend on them to keep our operating costs to a minimum."

Mohawk Motor, Inc.
Tiffin, Ohio

Try cooler-running Coopers on your toughest hauls. Match them against any other brand. Let your own records prove that Coopers really make payloads more profitable.

DISTRIBUTED STRESS CONSTRUCTION is the important reason why tire dollars go farther when trucks roll on cooler-running Coopers. Ask your Cooper dealer to give you complete details about DSC — how it adds extra strength at the shoulders, in the sidewalls and under the tread to protect against road shock, localized flexing, high friction heat.

Cooper
ARMORED-CORD
TIRES

Cooper Tire & Rubber Company
Factories at Findlay, Ohio

This spring, take the three

steps to better cooling system service!

FOR COMPLETE SERVICE

R. M. HOLLINGSHEAD CORPORATION. General Offices: **Camden, N. J.**
Canadian Offices: **Toronto.** Warehouses: **Dallas, San Francisco, Chicago.**

This CLEANS OUT
THE COOLING SYSTEM!

This
KEEPS IT CLEAN!

This
STOPS
LEAKS!

Whiz
PRODUCTS OF
Hollingshead
LEADER IN MAINTENANCE CHEMICALS

...THREE GREAT PRODUCTS!

R. M. HOLLINGSHEAD CORPORATION. General Offices: **Camden, N. J.**
Canadian Offices: **Toronto.** Warehouses: **Dallas. San Francisco, Chicago.**

Unusual PM

(CONTINUED FROM PAGE 46)

tion of the garage superintendent. At 50,000 to 60,000 miles, Inspection No. 4 (Fig. E) calls for complete engine overhaul.

Production Line Routine

ONCE the garage superintendent has grouped together the proper forms indicating the work to be done, and returned them to the forms case, the truck is ready for the "production line" routine. The order in which the trucks go down the line is predetermined by the superintendent's estimate of time required for the work indicated, and the time when the unit is needed for reuse. At each station, the operator or mechanic reviews the "Master Form" and the inspection forms. He performs the necessary work required in his department, initials the item on the "Master Form," and moves the vehicle to the next department. In those departments where work is done in accordance with the mileage inspection form in the cab, the working mechanic signs the bottom of the inspection form on completion of the job.

All Jobs Washed First

NOW let's follow a truck down the "production line." First stop for all trucks is the washrack building. Here the vehicle is given a shampoo and rinse. If necessary, it gets a thorough steam cleaning. As much as 1600 lb of dirt and grime have been removed at a single cleaning from the frame and underside of a large diesel combination. Advantages of cleaning a unit before any work is done on it are to facilitate inspection and to make repair work easier and faster. Equipment at this building includes a hydraulic lift, portable steam cleaning unit, and a catwalk to make the tops of vehicles accessible for cleaning. One man handles all the cleaning work.

Tires & Lube Next

THE cleaned truck next moves from the wash building directly ahead toward the grease building. At the entrance to the grease building, a tire man checks all tires before the unit is placed on the grease rack. All tire replacing and rematching is done at this station. Tire recapping and sectioning, however, are farmed out. All tires have a brand number and the tire man keeps an individual history of every tire. Any notations about tires on the "Master Form" are transferred by the tire expert to his own tire history record.

When tire inspection is completed, the vehicle is moved over the grease pit, where all necessary lube work is done and filter elements are changed. The grease man, in his turn, checks the "Master Form," does whatever is ordered on it, and adds notes on any items he believes need further checking. Three dispensing hoses for engine lube oil, two for gear lube, and two for chassis grease are all on automatic rewind spindles. Each dispenser has a gage so that the exact amount of lube material used on each truck may be recorded on a charge slip and charged against the truck. Charge slips Fig. F) are filled out at each station and turned in to the main office for accounting records.

(TURN TO PAGE 124, PLEASE)

contents

Refrigeration KNOW-HOW

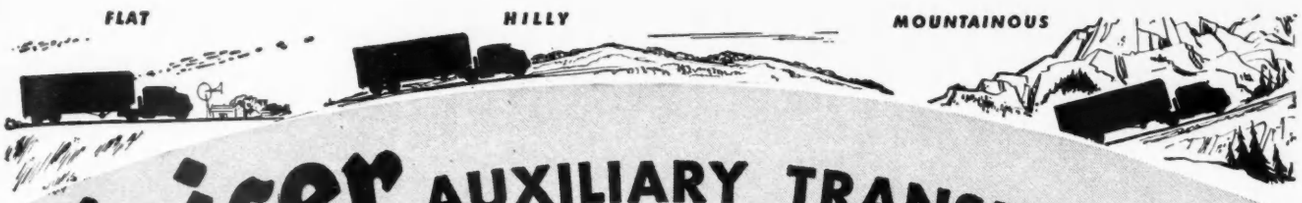
The new Kold-Hold Catalog is a book of benefits and savings. It contains refrigeration know-how . . . information relative to the better storage and transportation of perishable products at lower costs. This catalog shows that Kold-Hold Serpentine Plate Type Evaporators have no equal in efficiency and dependability for locker plant space cooling, for shelves and stands in sharp-freezing or as cabinet liners, shelves or dividers. It explains how "Hold-Over" Plate Type Evaporators maintain the temperature of delivery bodies at the uniform level necessary in the successful transportation of fresh meat, ice cream, frozen foods and other perishables.

If you are interested in better storage and transportation of your products, write for this new free book of refrigeration knowledge today.

KOLD-HOLD

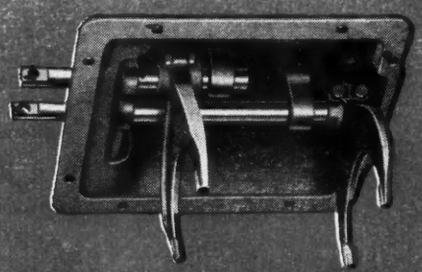
KOLD-HOLD MANUFACTURING COMPANY

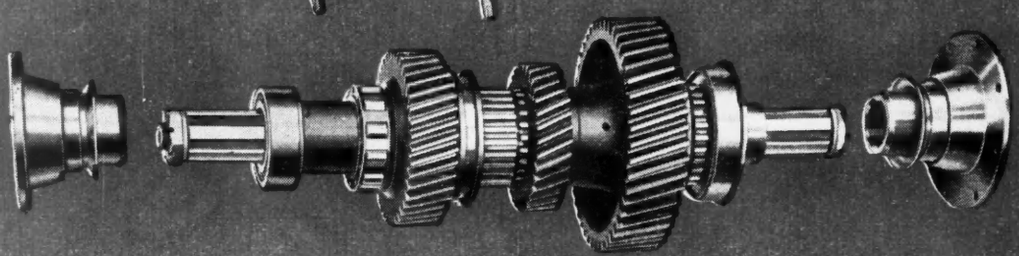
620 E. HAZEL STREET LANSING 4, MICHIGAN



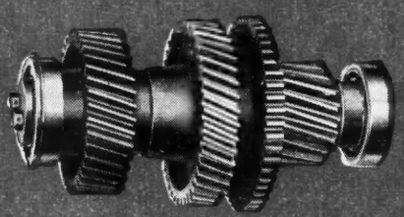
Spicer AUXILIARY TRANSMISSIONS improve truck operation on any terrain!

MULTIPLE-SPEED RANGE FOR HIGHER SPEEDS • BIGGER PAY LOADS • GREATER ECONOMY



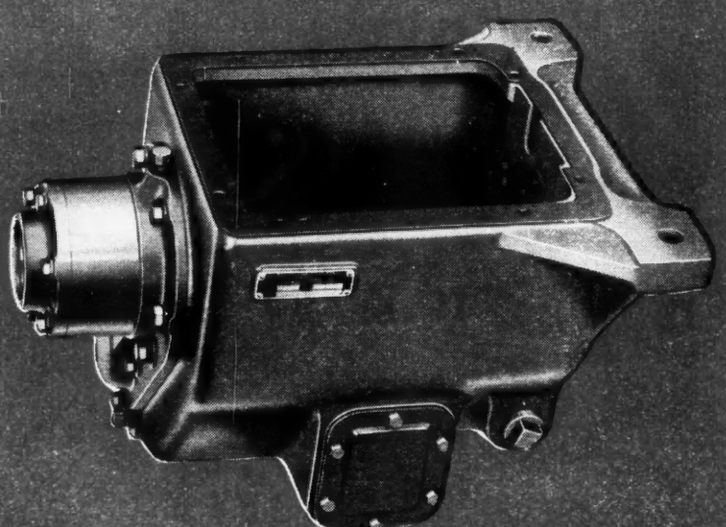


Spicer Auxiliary Transmissions permit drivers to pick the *right* gear ratio under all conditions of pavement, traffic, grade, load and wind resistance.



There are three convenient Power Take-Off mounting positions on the Spicer Auxiliary Transmission, to meet various requirements.

Write for information regarding the adaptation of Spicer Auxiliary Transmissions to trucks.



44 YEARS OF Spicer SERVICE

SPICER MANUFACTURING • *Division of Dana Corporation*
TOLEDO 1, OHIO

TRANSMISSIONS
TORQUE CONVERTERS

PASSENGER CAR AXLES • CLUTCHES • PARISH FRAMES • STAMPINGS • UNIVERSAL JOINTS
SPICER "BROWN-LIPE" GEAR BOXES • RAILWAY GENERATOR DRIVES

Use postage-paid card inserted at page 57 for free information on advertised products

WHO IS *Swishy*?

SWISHY is swift, smooth, silent car and truck performance.

What is Swishy holding?

That is a silencer. He uses it to blank out noisy, erratic service complaints.

What is Swishy's silencer?

It's a BCA Ball Bearing. The bearing that so many manufacturers choose for top performance in their new cars and trucks.

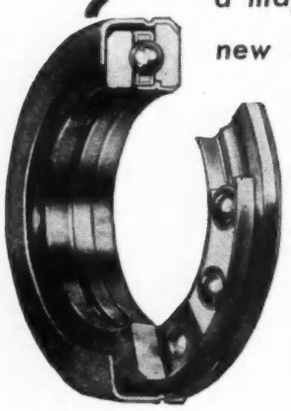
Does it work?

For fifty years BCA Ball Bearings have shown just how swell they do work.

How will Swishy work for me?

HE'LL REMIND YOU:

When you rebuild a clutch or do a major overhaul, always include new BCA Bearings as protection against extra downtime



When you buy bearings, look for the Jobber displaying Swishy and always ask for BCA Ball Bearings.

LOOK FOR *Swishy* ON DISPLAY

ALWAYS ASK FOR BCA

BCA BALL BEARINGS

Bearings Company of America, Lancaster, Pa.

Unusual PM

(CONTINUED FROM PAGE 122)

Then to Shops

NEXT stop for the truck is in the garage building, where shops are lined up in the following order: body shop; engine and electrical shops; and general repair shop. The "Master Form" and inspection forms determine which shop will receive the vehicle first. Usually, a truck will start at the body shop and continue down the line of departments until each shop has completed its work. However, the system is flexible, and if the bulk of work is required in the general repair department, for instance, portable equipment from all other departments can be put to work on the truck at the same time that the major job is being performed.

The garage building is rectangular, with all departments opening on the same side. The California weather precludes the need for doors and the only protection over the entrance area is a 10 ft overhang on which 1500-watt bulbs are mounted for night operations.

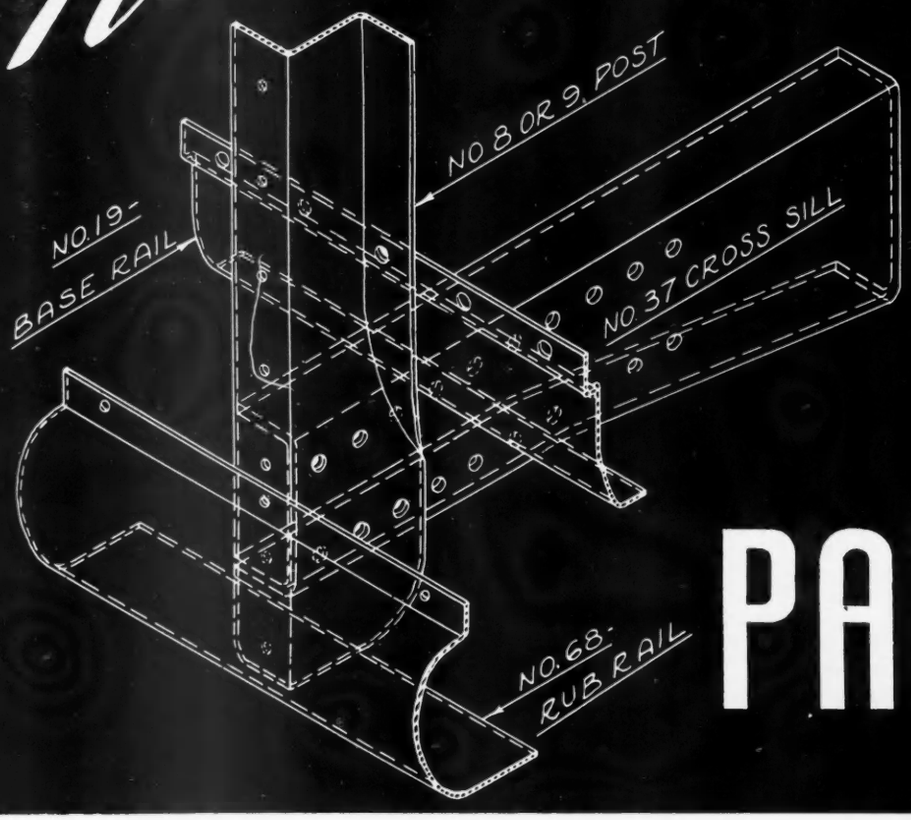
Each department is fully equipped to take care of any job within its scope. The only work that is farmed out is engine reboring, resleeving and shaft grinding. Painting is done out in the open with automatic spray gun equipment. Our large open and paved yard area permits us to keep vehicles far enough apart to protect them from excess spray. A fast drying synthetic paint—dry to touch in 15 to 20 minutes—minimizes the risk of dust accumulation. The clean asphalt topped area also accounts for a comparatively dust free painting area.

Each shop has an overhead rail system, which greatly facilitates movement of heavy parts. In the general shop area, at the end of the garage line, a section of overhead rail extends out of a side door, over a degreaser.

The stock room is located between the body shop on one side and the engine repair and electrical shops on the other side. Parts which move rapidly are kept on the main floor and those which are not called for as often are stored on a mezzanine. A specially constructed concrete base-

(TURN TO PAGE 126, PLEASE)

New POST ASSEMBLY



by

PARISH

THIS new side post is a two-piece design which permits the use of a very light gauge steel at the top and a much heavier gauge at the bottom. The post flanges taper from 3/4 inch to 1 3/8 inches. They are designed so that there is more metal where the greater stresses occur, and no surplus weight where it is not required to carry loads, resulting in a much lighter and stronger post structure.

The flared-out base design overcomes the difficulties experienced at one of the most critical weak spots in all former types of body construction. The stress per square inch of cross sectional area is considerably reduced.

The new post base design makes the structure especially well suited for open top bodies or any body where there is excessive side wall pressure or sway.

Over sixty other *PARISH UNIVERSAL BODY SECTIONS* are now available from our large stock.

Save time and labor and build better bodies by using *PARISH UNIVERSAL BODY SECTIONS.*

Let us give you more detailed information. Write today.

PARISH PRESSED STEEL CO. *Subsidiary of* **DANA CORP.**
READING, PA.

Western Representative: F. Somers Peterson, 57 California St., San Francisco, Cal.

Unusual PM

(CONTINUED FROM PAGE 124)

ment beneath the stock room is used to store and cure new tires. Tires are kept in this cool, dark place for about two to six months before they are put into service. Our experience shows that this additional aging gives the tires a little better wear.

Garage personnel includes three men in the body shop, one of whom is a carpenter and painter; the other two, body builders. A full time man handles the whole stock room system. Two men in the engine rebuild room, one electrical expert, and six general repair men complete the staff. The garage superintendent, who has a small office sandwiched between the electrical and engine repair departments, supervises and coordinates all work.

As each mechanic finishes his work, he initials the "Master Form." The mechanic who has carried out the specific mileage inspection called for, signs the bottom of that inspection form. When special work has been done on a vehicle and particular watchfulness is required after the work, small stickers indicating new engine or new components (Figs. G and H) are pasted conspicuously on the instrument panel in the cab. They have bold red lettering and act as a constant reminder to the driver.

Final step in the assembly line maintenance procedure is a chassis dynamometer check. The instrument is located outside the garage building, next to the general repair shop, and just in front of the degreaser. The advantage of this outdoor location is that the exhaust is dissipated into free air rather than inside the garage. A metal cover protects the instrument when not in use. The electrical expert puts the vehicle through its paces and makes his report on a "Performance Rating" card (Fig. I).

The garage superintendent reviews all the forms and if everything has been checked and initialed, puts his own signature on the "Master Form." The vehicle is then ready for use and is moved off to a parking area and the dispatcher notified of the truck's availability.

The superintendent takes the completed forms from the cab's forms compartment and keeps them on file for one year. In case of a failure, the garage superintendent can easily check to tell whether it was due to lack of PM, failure to report, or improper repair.

Final Check Out List

THE final form used in the Lyon system, a check out list (Fig. J), is intended to insure that the unit is safe for the road before it is given an assignment. A full time man handles the work of preparing the trucks for the road. His list includes such items as check of couplings, airlines, electrical connections, brake operation, and presence of all emergency equipment. When his check out list is signed and handed in to the dispatcher, the truck can then be turned over to the driver and is ready to roll again.

END

(Please resume your reading on P. 47)

OUT OUR WAY
HELP HIM THERE-- I'LL GET TH'--A STRETCHER-- NO, I MEAN-- I'LL GET SOMETHING!
FUNNIEST FALL I EVER SEEN--BOY, I FEEL SORRY FOR TH' POOR CLEAN-UP MAN!
YES, SIR! FIRST TIME HE FORGOT TO PUT DOWN SOL-SPEEDI-DRI -- AND LOOK WHAT HAPPENED!
THE FALL OF THE YEAR
J.R.WILLIAMS

Quality makes SOL-SPEEDI-DRI the leader

SOL-SPEEDI-DRI is industry's No. 1 absorbent for all liquids. Spread over dangerous, oil-soaked floors, it provides a slip-proof carpet—cuts down on accidents caused by slips and falls. More SOL-SPEEDI-DRI is used in plants and shops all over the country than any other product of similar nature. The reason? There are many, but the big one is *quality*—constant, unvarying quality from one pound of SOL-SPEEDI-DRI to the next.

SOL-SPEEDI-DRI is mined and processed by people who are specialists in the business. Only nature's finest product is used, and this raw material is processed under stringent laboratory control into the finished product. SOL-SPEEDI-DRI comes to you in special weather-proofed bags, insuring factory-fresh material at time of use. That's why you can count on SOL-SPEEDI-DRI to do *more* work, to give you *more* for your money.

WHEN YOU BUY, BE *SURE* IT'S SOL-SPEEDI-DRI

Safety and
Maintenance Co., Inc.
No. 1 Wall Street
New York 5, N. Y.

•

Warehouse Stocks Available in Principal Cities of the United States and Canada.

LEARN HOW YOU CAN OWN THIS

New Thompson Technical Library

. . . at no cost to you!

THE STREAMLINED POSTWAR SUCCESSOR to the famous Thompson Tune-Up and Repair Manual. Now in separate, indexed volumes enabling several mechanics to use the library at the same time. Hundreds of pages and thousands of pictures and diagrams show how jobs are best done—how tricky assemblies go together, how accurate adjustments are made. Covers models from 1939. To keep up-to-date, supplementary bulletins on 1948 models come to you as information is available.

Every mechanic can do engine and chassis jobs better, faster, more profitably with this library.

Thompson Products Technical Library
WHERE TO FIND IT IN THE THOMPSON TECHNICAL LIBRARY
27 separate volumes of "show-how"! 16 volumes on passenger cars;
11 volumes on trucks, tractors, buses, Diesels and industrial engines.

Sturdy steel cabinet holds all volumes for quick reference. Hangs on wall, or stands on desk or work bench.

PHONE YOUR TP JOBBER NOW!

He'll tell you how you can get the complete 27 volume library or start assembly of individual volumes with your own selection of Thompson engine and chassis replacement parts, at your regular discount.

OR SIMPLY ATTACH THE COUPON **to your billhead or letterhead and mail it to your TP Jobber today.**

Sir: I want the new TP Technical Library! How do I get it?

Name

Company

Address

See Your **Thompson Products** *Jobber*

CLEVELAND • DETROIT • LOS ANGELES

Wide Base Rims

(CONTINUED FROM PAGE 47)

well. The stiff, wired bead construction is not conducive to easy mounting of a heavy-duty tire on a drop-center rim. When the synthetic tires came along, the difficulty in mounting and the loss through mounting damage was even greater. The condition of having to force rigid beads onto the rim, with its many headaches, had to be eliminated.

"This is how we did it—in fact, we are still doing it with great success. We took the standard drop-center type disc wheels and cut the rim off. Then we welded a wider, semi-drop center LTS-5:50F Goodyear rim, having a lock ring arrangement, on the old wheel. This gave us both the wider rim and, at the same time, eliminated the trouble and danger of forcing a tire onto a one-piece full drop-center rim. New trucks in the half-ton class still come through with the drop-center rim and we have to change them over to wide base.

"Cost of the changeover runs about $55 per truck. We use the same size tire, 6.50x16, that we used before."

Actual Savings Obtained

KRUG Baking keeps as complete records of operation and maintenance as probably anyone in the transportation business. A penny wasted or saved shows up clearly and definitely; in brief, the findings are very likely to give an accurate picture. With some understandable pride, McEwan reports, "On trucks changed over to wide base rims, we show a saving on the total tire bill of 27 per cent for 1947 over 1946, where the rim equipment in 1946 was standard. This saving is divided between the cost of new tires and expenses for repairs. Our cost per mile for tires is down almost 40 per cent.

"Tread wear has been reduced about 30 per cent. Where we formerly got an average of 12,000 miles on pre-war tires we are now getting 16,800 on present production tires.

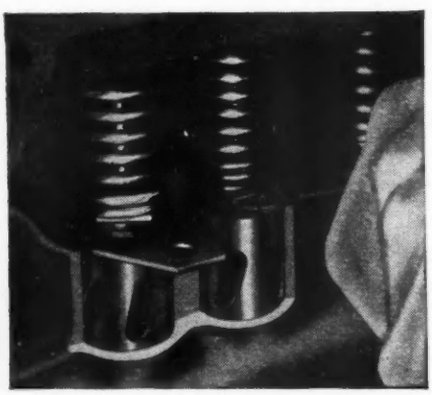
"Separations of cords in the sidewalls has been eliminated. Previously, we had such separations weekly on one or more tires. Bead breaking, in mounting or dismounting tires (even with new tires in some cases) has been eliminated; previously, it had been a weekly occurrence. Whereas, a man had to battle for an hour, or so, to change a tire on a standard rim and a drop center, now he can do the same job in 15 minutes with the wide rim and lock ring design."

(TURN TO PAGE 130, PLEASE)

V-8 VALVE JOBS MADE EASY!

WITH Johnson ADJUSTABLE TAPPETS

Do the job right! Install Johnson Adjustable Tappets in Ford and Mercury V-8's (85-100 HP engines). No expensive shop equipment is needed. Installations are made in half the ordinary time and without the task of fitting valves. Special spanners are included with each set of tappets, leaving both hands free for quicker and more accurate adjustments. Each tappet maintains its setting and gives many thousands of miles of superior engine performance.



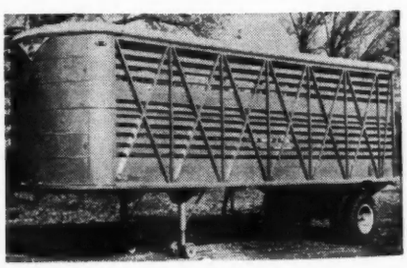
The millions of Johnson Tappets in use today are giving dependable service and providing smooth, quiet engine performance.

You'll find that you will make larger profits and gain more satisfied customers when you install Johnson Adjustable Tappets.

AVAILABLE AT N.A.P.A. WAREHOUSES AND JOBBERS

Johnson PRODUCTS INC.
MUSKEGON, MICHIGAN
"Tappets Are Our Business"

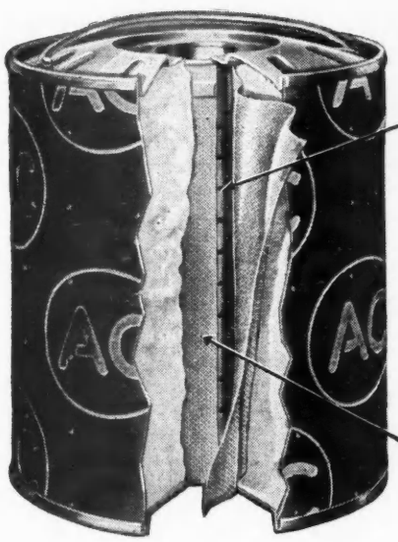
Supercargo Livestock



American Bantam Car Co.'s new livestock van features the Supercargo "bridge-truss" construction of 2-in. welded steel tubing and "quadri-point" suspension with spring steel torque arms to assure equal load distribution even under shifting of live cargo

NOW AVAILABLE!

New "5-STAR QUALITY" AC OIL FILTER ELEMENTS with Glass Cloth Collector Tube Trap



Acidproof glass cloth covered collector tube.

Glass cloth trap will not deteriorate when attacked by engine oil acids,—an exclusive AC advantage.

AC has the only Oil Filter Elements with glass cloth Collector Tube Trap. This Trap is acidproof and can't rot to allow pollution of the oil. It provides a second stage of filtration, after the oil has passed through the ram-packed virgin cotton filtering material. Buy AC "5-Star Quality" Elements for better filtration.

COMPLETE OIL FILTERS—10 SUPERIOR FEATURES

AC "5-Star Quality" Oil Filters are engineered for every commercial vehicle and proved by 2 years of actual service. Quality-built throughout, with extra heavy gauge steel; machined gasket seat; high restrictor outlet to prevent "drain back" to the crankcase; glass cloth Collector Tube Trap; ram-packed virgin cotton Element, with positive end seals—and many other advantages.

ASK YOUR AC SUPPLIER FOR THE FULL "5-STAR QUALITY" STORY

AC SPARK PLUG DIVISION • GENERAL MOTORS CORPORATION

Wide Base Rims

(CONTINUED FROM PAGE 128)

Less Road Service

THE amount of road service is noiceably less, with the adoption of wide rims. In the three months just past, there were 27 calls for tire road service, which is quite low for a fleet of 680 trucks and noticeably very much less than our previous experience. The trucks average 40 miles per day on a 6-day schedule and about 45 trucks are being continually serviced and maintained as spares. Daily inspections of all trucks on duty for tire cuts, bruises, inflation, etc., help to support the low road repair experience. Steering and wheel alignment checks are also considered to be key factors in maintaining tires and saving rubber.

Not only do the wide rims contribute to savings in tread wear and tire damage, but they also afford better steering, less sway, safer driving, and less strain on the chassis members and component parts.

Four Retread per Tire

THE economy of retreading or recapping a truck tire having a sound carcass is an accepted fact. A possible unknown fact about retreading is brought out by McEwan. He say, "We used to retread or recap once or twice, at the most, when we had standard rims. With the wide rims, we can retread or recap as much as four times with safety and economical results. That's one saving worth considering!"

Fewer separations and fewer cases of side wall damage, McEwan says, is the reason behind this startling savings.

Increased Loads

ALTHOUGH it is not a generally recommended procedure, wide base rims can also carry more weight, as witnessed by the fact that Krug Baking now carries up to 2300 lb loads where they formerly carried only 1000 lb. To make this possible a 1½-ton front axle was substituted for the original ½-ton axle. But the savings indicated above were accomplished despite these increased loads.

Advice to Fleets

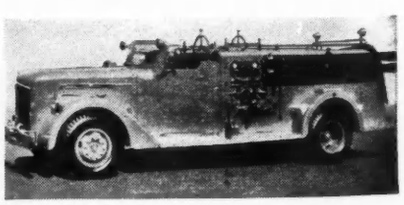
"THE expense we incurred in changing over to wide rims isn't exactly slight," McEwan warns, "but the investment and time are well spent. We figure to have our investment returned in a year or less; with subsequent use of the wide rims 'all gravy.' From all standpoints, the 70 per cent rim and tire ratio is a sensible and economical setup."

END

(Please resume your reading on P. 48)

TOUGH-
U.S. Axles take the loads and bring 'em in on dependable, trouble-free schedules--- Get U.S. Axles at your Jobber's.
FREE - BULLETIN LISTING U.S. HEAVY DUTY REPLACEMENTS FOR ARMY SURPLUS TRUCKS
WRITE - POTTSTOWN, PA.
US AXLES

General Fire Truck



General Pacific Corp. has turned over its plant in Los Angeles exclusively to the manufacture of fire trucks. All are built to individual specifications

for Safety's Sake...

RECONDITION with WAGNER LOCKHEED HYDRAULIC BRAKE PARTS and FLUID

Turn out better brake jobs . . . help reduce automobile accidents.

You'll find it pays to use genuine Wagner Lockheed Hydraulic Brake Parts. Made by a pioneer in hydraulic brakes, Wagner replacement parts are of the same guaranteed, long-lasting quality as the Wagner brakes used as original equipment by car, truck and bus manufacturers.

Wagner Lockheed Hydraulic Brake Fluid is an all-season fluid that functions perfectly under all driving conditions. Used by car and truck manufacturers and recommended for all hydraulic brakes. Wagner brake parts and fluid...and Wagner CoMaX brake lining.....are warehoused throughout the U. S. and Canada, and are available everywhere through Wagner jobbers.

Wagner Electric Corporation
6470 PLYMOUTH AVE., ST. LOUIS 14, MISSOURI

EVERY REPAIRMAN NEEDS
Bulletin HU-17G and HU-197
Tips for better Brake Service—free on request

RELINE with Wagner CoMaX Brake Lining

Wagner Electric Corporation EST. 1891

LOCKHEED HYDRAULIC BRAKE PARTS and FLUID - NoRol
CoMaX BRAKE LINING - AIR BRAKES - TACHOGRAPHS
ELECTRIC MOTORS - TRANSFORMERS - INDUSTRIAL BRAKES

H48-17A

GMC—C-O-E

(CONTINUED FROM PAGE 70)

the FF-350 series, designed to meet the demand for a short wheelbase c-o-e tractor in the two-ton range, offered for operators engaged in automobile hauling. It has a 110-in. wheelbase and a 60-in. CA dimension. Overall length is 186 in., making it 16½ in. shorter than the shortest of the other models in either the FF-350 or FF-450 series. Weight ratings for both truck and tractor service are the same as the other FF-350s.

In comfort, convenience and safety the new models have the features of conventional models with built-in fresh air ventilation system, greatly increased visibility, fully adjustable seat with nearly double the number of springs, 3-point rubber stabilized cab mounting, easier operating clutch and brake pedals, improved ball-bearing steering, and other features such as dual windshield wipers and provision for radio. All models except FFR-351 are available with the optional deluxe cab which has, in addition to the above features, rear quarter windows, arm rest, right side sun visor, stainless steel windshield trim and stainless steel exterior and interior window reveals. Deluxe cabs for FF-450 models also have foam rubber seat pads.

Interior view of new GMC coe cab reveals individual seats, ease of access and convenience of controls

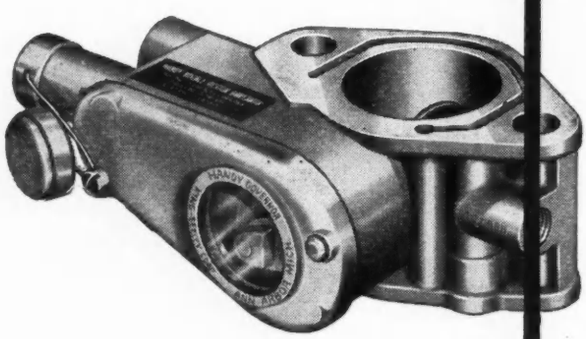
In engines and chassis all models are likewise identical with their counterparts in the conventional line. The FF-350 models are powered with the GMC "248" engine. The FF-450 series has the "270" engine as standard, with the "248" optionally available if desired.

The new models have solenoid starting instead of manual and the spare tire carrier is now standard equipment. On the FF-350 the rear wheel bearings are of greater capacity while the rear axle shaft tube is of heavier construction. The radiator core overflow tank on this series now is standard equipment. Another important change on the FF-350 is adoption of a four-speed synchromesh transmission, replacing sliding gears. On the FF-450 the standard transmission is five-speed helical gear, direct in fifth; optional—five-speed helical gear overdrive. The FF-450 has heavier sheet metal all around.

Steering gear ratio has been stepped up to 27.8 to 1 on the FF-350; and 28.1 to 1 on the FF-450.

END

(Please resume your reading on P. 72)



This GOVERNOR

Anger, fatigue, grief, or joy—any one of these can temporarily transform a reasonably good truck driver into a serious traffic menace. This very thing has happened too often to ignore the danger of these human reactions.

The Handy Vari-Speed Governor, however, is not human, is never emotionally involved, but always comes to the assistance of the human driver who is. When your truck fleet is equipped with the Handy Governor, you have good reason to expect fewer accidents, and you will also save on tires, engine repairs, lubrication and brake maintenance.

The Handy Governor costs but a small fraction of what it will save you in its first year of operation.

HELPS KEEP the Emotional Driver OUT OF TROUBLE

KING-SEELEY CORPORATION
ANN ARBOR MICHIGAN

...ANTS IN ANN ARBOR • GRAND RAPIDS • YPSILANTI

MORE POWER TO YOU...

Sensational...Scientifically engineered

HYPER-POWER UNIT

...with Long-life Heinite Piston

Exclusive with

HEIN-WERNER HYDRAULIC JACKS

raises cars and trucks with greater *EASE...SPEED...SAFETY!*

Made in models of 1½, 3, 5, 8, 12, 20, 30, 50 and 100 tons capacity as well as service jacks for shop use and Bumper-Lifts for passenger cars. See your H-W distributor or write us.

*HYPER, according to the dictionary means *over, above, beyond the ordinary.*

Hein-Werner HYDRAULIC JACKS

HEIN-WERNER CORPORATION • WAUKESHA, WISCONSIN

Million-Dollar Garage

(CONTINUED FROM PAGE 37)

controlled at the front post, with separate controls for each post. Oil dispensing hoses also coil in an overhead reel, containing four grades of lube oils, 10, 20, 30, 40, available in the same number of hoses.

In the oil and grease storage room, a battery of three air-powered dispensing pumps are fastened to the oil and grease containers. When these pumps must be raised to remove and replace empty drums, a button control on the wall operates another air-powered device that raises the steel panel holding the pumps, eliminating an awkward job.

Mobile Fire Fighters

EACH floor has a mobile fire-fighting unit, utilizing carbon dioxide. The units are constantly plugged into electric receptacles, maintaining dry ice storage as the source of the carbon dioxide.

A heavy monorail is built over the repair department with two two-ton manually-operated hoists available for repairmen.

The public address system in all three floors of the new garage is so completely covering in placement of speakers, that it is impossible for anyone to "hide."

Mechanics or lubrication men dump waste oil into gravity pipe line receptacles at the lubrication stations, and it is safely fed into an exterior underground storage tank of 550-gal capacity.

At present, approximately 200 vehicles are serviced by this garage, 75 of which are stored elsewhere and given first echelon maintenance at their local garage. In addition to these local vehicles this garage performs a number of functions for the whole fleet of upwards of 400 vehicles. Such functions include service on all new cars, undercoating, and mounting and painting of special bodies. Also, heaters, air compressors, fire extinguishers and all sorts of special equipment is installed in Cleveland.

The following jobs can be carried on simultaneously: 10 mechanical overhauls (two where car lifts are required), 2 grease jobs, 1 paint job, 1 car wash.

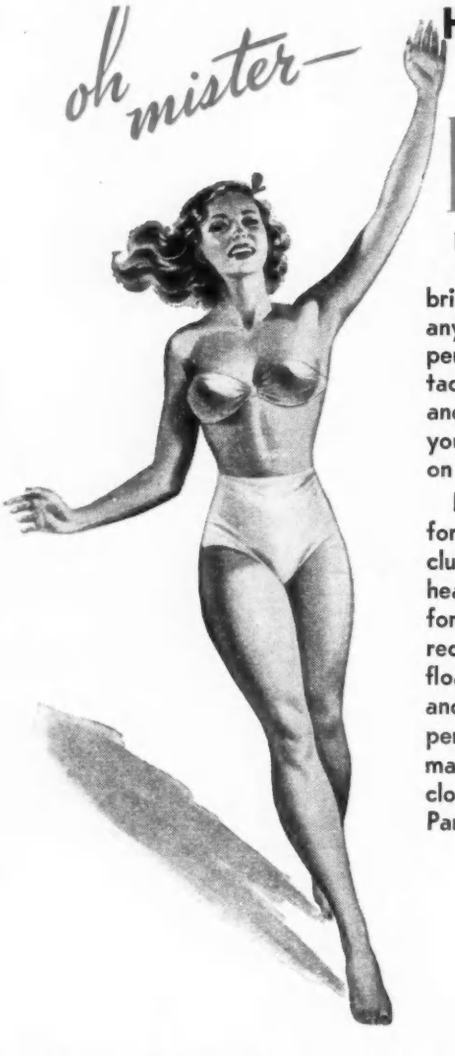
The garage organization consists of 1 garage supt., 1 clerk, 5 foremen, 21 mechanics, 2 stockmen, 7 porters and washers, and 3 grease monkeys, making a total of 40.

Of this personnel, about 10 men work in the three small outside garages. Incidentally, building maintenance and cleaning work is done by another department, with garage personnel only caring for own tools and equipment and immediate work space.

The new garage is just a unit in the East Ohio Gas Co.'s No. 2 Works, a $2,500,000 building program close to the city lake front. Nearing completion is an adjacent building to house office, meter repair and stock room of the Cleveland operating division. The works is under the supervision of George P. Binder, superintendent, while the new garage superintendent is W. W. McCartney.

END

(Please resume your reading on P. 38)



HERE ARE SOME POINTERS ON

POINTS

Fleet units that keep rolling and keep running right are the only ones that bring in the money. And, nothing helps any more to guarantee efficient motor performance than good Ignition Contacts! So, to keep operating profits up and maintenance expense down—watch your Points—insist on the name ECHLIN on the Contacts you install.

ECHLIN Heavy Duty Ignition Contacts for all battery ignition systems offer exclusive advantages Fleets must have for heavy duty service and top ignition performance — mirror-finished Tungsten directly fused to the arm; stainless steel, floating Spring that reduces breakage and bushing wear: copper Conductor for perfect conductivity; and the ultimate in manufacturing precision, held to the closest tolerances ever known in Ignition Parts.

Here's a Booklet you and your mechanics need. It's FREE. It gives you the pointers you need to know about Ignition Contacts and ignition system trouble shooting. Send for your copy NOW!

NAPA Symbol of Quality

ECHLIN Ignition

A PRODUCT OF ECHLIN

CONTACTS
COILS • CONDENSERS
& OTHER AUTOMOTIVE
ELECTRICAL PARTS

ECHLIN MANUFACTURING COMPANY
234 East Street . New Haven 5, Conn.

FOR DEPENDABLE RING JOBS!

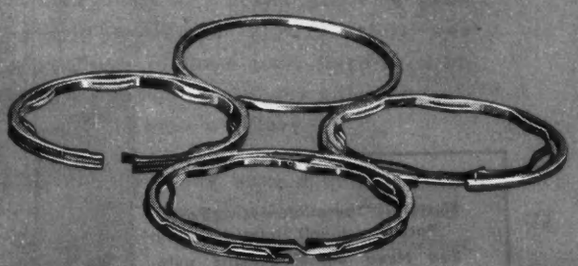
OIL SAVER SETS
for new or rebored cylinders

MoPar Power Punch PISTON RINGS

FOR

CHRYSLER CORPORATION-BUILT VEHICLES

OIL MASTER SETS
for re-ring jobs



MoPar Power Punch Piston Rings are Chrysler Corporation's own replacement rings!

These sets—OIL MASTER for re-ring jobs and OIL SAVER for new or rebored cylinders—have been developed by the same engineers who designed the engines for Plymouth, Dodge, De Soto and Chrysler cars, and Dodge "*Job-Rated*" Trucks.

They are made to the same standards of manufacturing and inspection as the vehicles themselves. That's why their use in cars and trucks built by Chrysler Corporation assures improved power, greater oil economy and longer service.

What's more, new packages list complete model application. It's easy for you to order and use MoPar Power Punch Piston Rings! So . . . plan now to stock and install MoPar OIL MASTER and OIL SAVER sets. They'll help you turn out the best ring jobs every time!

Here's where you get MoPar *Power Punch Piston Rings*

You can get MoPar Power Punch Piston Rings and related parts for Plymouth, Dodge, De Soto or Chrysler cars, and Dodge "*Job-Rated*" Trucks from dealers for these vehicles.

CHRYSLER CORPORATION — PARTS DIVISION
DETROIT 31, MICHIGAN

USE CHRYSLER CORPORATION PARTS DIVISION
MoPar
TRADE MARK
PARTS AND ACCESSORIES
FACTORY ENGINEERED AND INSPECTED

Factory Engineered and Inspected for
PLYMOUTH · DODGE
DE SOTO · CHRYSLER CARS
DODGE "Job-Rated" TRUCKS

Dual Fuel System

(CONTINUED FROM PAGE 63)

be supplied with high octane-number fuel. The rest of the fuel system is visualized as consisting of a two-compartment fuel tank, a double fuel pump driven by a single eccentric on the camshaft, and two fuel lines from the fuel tank compartments through the pump and from the pump through the carburetor. This arrangement is shown schematically at the beginning of this article.

Octane Requirement Studied

DEVELOPMENT of Socony-Vacuum's dual-fuel system was prompted by exploratory work of their automotive research laboratory on the octane-number requirements of present day automobiles to determine how the economy of passenger car operation could be improved without loss in performance. After exhaustive road tests of several different types of passenger cars, W. M. Holaday, Director of the Socony-Vacuum laboratories, concluded that engineers of the automotive industry, instead of depending solely upon increases in the octane-number of gasoline for improved economy, should examine the manner in which the anti-knock quality of present gasoline is being utilized. He believes that automotive design and motor fuel marketing policies can bring about a readjustment of the spread in quality between the regular and premium grade gasolines to give, with present refining equipment, about 20 per cent of the premium grade needed, if the automobile industry produces engines of the experimental type now under discussion.

LOOK! The Light that FLASHES Instant, Positive Warning

Electronic Operation—using Power-Pack and 6-volt Lantern Battery.
Red Neon Signal — starts automatically.
"Lighthouse" Fresnel Lens
Rainproof, Dustproof—functions at high or low temperatures.
Meets I.C.C. Requirements—Listed under Re-examination Service of Underwriters' Laboratories, Inc.

THORO FLARE
TRADE MARK PATS PENDING
EMERGENCY ELECTRONIC BEACON

In an emergency . . . you can depend on Thoro-Flare—the new and better safety beacon—to provide instant, positive protection to life and property on the highway. Thoro-Flare starts flashing its warning the moment it is put in position; gives a red neon signal visible at least 500 feet in fair or foul weather.

Heart of Thoro-Flare efficiency is the Power-Pack that steps up 6-volt lantern battery current to produce a high frequency neon flash. Built-in mercury switch is fully automatic—no manual switches. The battery will give 100 hours of continuous operation, more if used intermittently, *with no diminishing of signal intensity.*

SEND TODAY for new bulletin with complete specifications and prices.

SIGNAL MANUFACTURING CORPORATION
624 South Michigan Avenue Chicago 5, Illinois

Complete kit includes three Thoro-Flares in weatherproof steel box ready for mounting on vehicle. Also sold in single units.

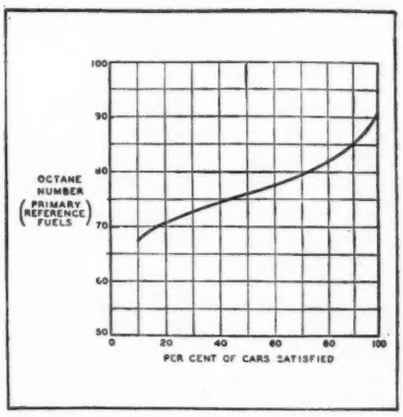


FIG. 1 *Curve shows percentage of current passenger cars satisfied with various octane-number gasolines*

To determine the peak octane-number requirements of a typical present day automobile engine, a representative cross-section of passenger cars was tested with different grades of fuels for very light knock over the speed range under full throttle, in high gear, and under level road accelerating conditions. The data, shown in Fig. 1, were obtained in two independent surveys, using a total of 81 cars, 1946 and 1947 models. The curve shows, for example, that 80 per cent of the cars tested are completely satisfied by an 82 octane-number fuel, while 95 per cent are satisfied by an 87 or 88 octane-number fuel.

Part Throttle Operation

TO determine part-throttle or road load octane-number requirements of the present day passenger car en-

(TURN TO PAGE 138, PLEASE)

Eliminate costly break-downs by modernizing your equipment with *SYLVAN* aluminum timing gear sets.

Now standard equipment on Chevrolet, Ford and G. M. C. Trucks.

Available for Chevrolet, Ford, Hudson, Mercury and Studebaker cars, Yellow Coaches and Willys Jeeps.

One user says:

"We have been using Sylvan Aluminum Timing Gears as a replacement for composition gears for approximately one year. Some of these gears have been installed for 60,000 to 80,000 miles and we have yet to have a failure.

"So that you may have a better understanding of our operation, our fleet consists of GMC's and Chevrolets numbering close to 200 units. The loads vary from 13,000 lbs. to 19,000 lbs. pay load. The tractors are operated on level and mountainous terrain, on trips varying from 200 miles to 1,400 miles round trip.

"It has been our experience in our fleet that 25,000 miles to 30,000 miles is the most we can expect from composition gears. Therefore, we are using Sylvan Aluminum Timing Gears in sets 100% in all of our rebuilt engines and for replacement of composition gears when they fail.

Order from your jobber. If not in jobber's stock, write us and give jobber's name. Write or wire for literature and complete information.

DEXTER MACHINE PRODUCTS, INC.
CHELSEA, MICHIGAN

Dual Fuel System

(CONTINUED FROM PAGE 136)

gine, one eight-cylinder 1946 car was selected as typical of the group tested, and was operated with various grades of gasolines. The curves obtained are shown in Fig. 2. The octane-number requirements of this engine at full throttle and at road load are also given to illustrate the large differences in octane-number requirements at various throttle openings. As shown by the curves, this car, which had a higher than normal compression ratio, gave knock-free operation at speeds up to 40 mph under road load conditions on zero octane-number fuel. Also, it is shown that 30 octane-number fuel gave knock-free operations up to 63 mph.

To determine the per cent of total operating time that a passenger car engine demands a fuel meeting the peak octane-number requirements. several cars were operated on various grades of gasolines in city traffic, level open road and over mountainous terrain. Results for the typical eight-cylinder car showed that fuel of 70 octane-number gave knock-free performance for 95 per cent of the driving time. This demonstrates the frequent waste of anti-knock quality, since an 80 octane-number fuel is used in this car 100 per cent of the time to satisfy a five per cent peak requirement.

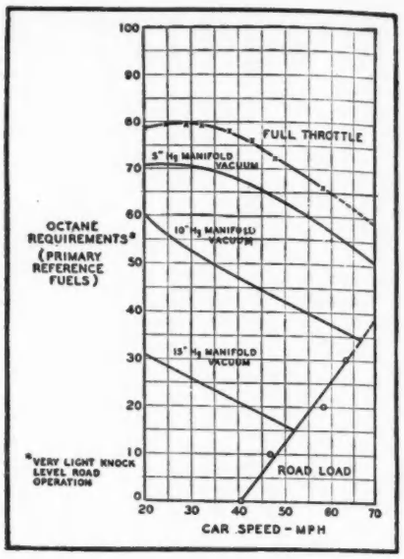


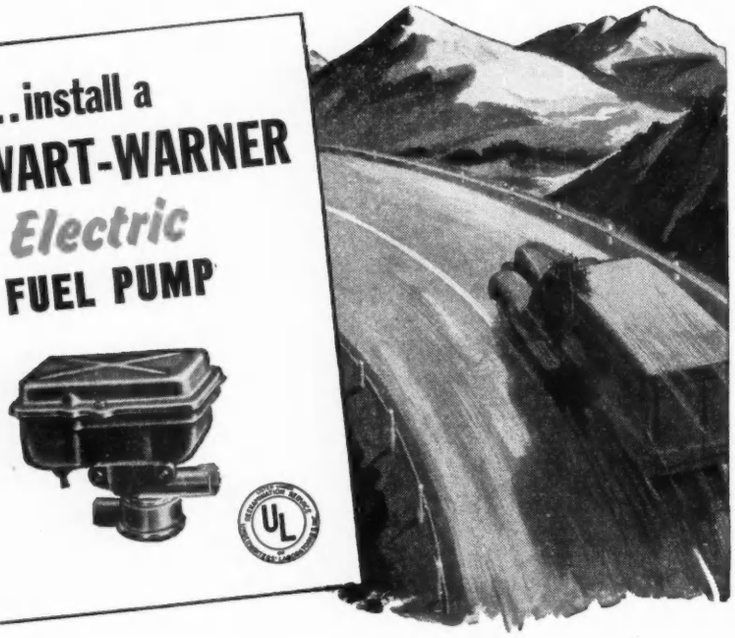
FIG 2 *Curves show octane requirements at various vacuum pressures. Note low requirements for road load at various speeds shown at lower right*

END

(Please resume your reading on P. 64)

When Your Trucks *Gasp* for Gas...

...install a
STEWART-WARNER
Electric
FUEL PUMP



- Ends vapor-lock and fuel pump failure
- Operates only when needed
- Helps maintain tough schedules
- Insures quick starts in any weather
- Delivers a minimum of 15 gallons of gas per hour
- Reduces operating costs
- No fire hazard
- Available for 6 or 12 volt installations

110 DUAL PUMP

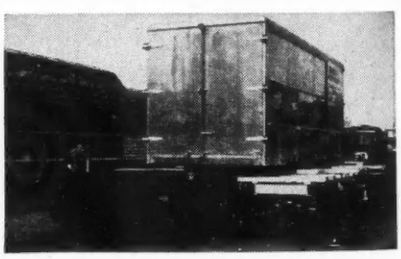
Dual fuel pump installations are recommended...

Whenever gasoline mileage is less than 5 or 6 miles per gallon.
Whenever gasoline consumption approaches 15 gallons per hour.
Whenever the total fuel line is over 20 feet long.

Each pump in a dual unit may be wired to a separate switch. When only one of the pumps is being used, the other acts as a booster and reserve pump, increasing the fuel delivery of the active pump as much as 30%.

STEWART-WARNER CORPORATION
Instrument Division
1876 Diversey Parkway, Chicago 14, Illinois

ICR Uses "Traileralls"



Going to work for the Illinois Central Railroad on the Chicago-Memphis run are 12 of the new aluminum "Trailerail" containers for package shipments. These units, recently designed and developed by Reynolds Metals Co., are transported between shipper's loading docks and freight yards on special trailer frames and are shifted mechanically to standard type flat cars by means of built-in hydraulic lifts and a winch-and-cable arrangement. At the destination, they are shifted back onto trailers and delivered to consignee's door — efficient, compact, economical for handling shipments up to 20,000 lb.

No. 1 Choice of Leading Fleets

"Friction-Engineered" AXLE SETS

★ Fleet owners across the nation prefer American Brakeblok "friction-engineered" axle sets over any other brake lining.

For one reason, American Brakeblok makes 25 different types of friction material. From this full range of first-quality linings, each axle set is "friction-engineered" to meet the exact requirements of a specific make and model of truck. All the braking factors of each vehicle are carefully taken into account—to make sure each set of lining has precisely the right combination of braking values for best performance and economy.

There are other reasons, too. American Brakeblok brake lining is entirely unlike other friction materials. It's the *same all the way through*. It wears evenly . . . stands up under the highest temperatures of heavy-duty service . . . provides smooth slow-downs and sure stops from first to last mile. Need for frequent adjustments is eliminated because American Brakeblok is non-compressible under severe braking pressures.

Cut operating costs and insure maximum safety for every unit of your fleet. Reline with the proved favorite—American Brakeblok. Give your NAPA Jobber precise information on the make, model and year of each fleet unit and its braking system—and he'll see that you get the American Brakeblok sets "friction-engineered" to your exact needs.

THREE DISTINCT SERIES OF HEAVY-DUTY BRAKE LINING

REGULAR: Recommended for vehicles with manual brake systems. Also usable on vacuum or air brake systems, but may produce needlessly severe brake action, thus shortening service life. Available in rolls, complete sets and axle sets.

1,000 SERIES: Engineered primarily for vehicles with vacuum power booster systems. Also recommended for air brake systems where there is need for greater deceleration than is provided by 2,000 series. Available in axle sets only.

2,000 SERIES: Designed to give maximum mileage and efficiency under extreme braking conditions with air brakes or powerful vacuum systems. Available in axle sets only.
"C" SERIES: Thick blocks to be used on air brakes only (or powerful vacuum systems).

NAPA

American Brakeblok is distributed through 39 NAPA Warehouses, assisting jobbers everywhere to give prompt, complete service.

American Brakeblok
REG. U.S. PAT. OFF.
BRAKE LINING

AMERICAN Brake Shoe COMPANY
AMERICAN BRAKEBLOK DIVISION
DETROIT 9, MICHIGAN

Private Owners

(CONTINUED FROM PAGE 72)

tice will be legalized which may be used later to their injury or possible destruction."

R. J. O'Hare, of Sheffield Farms Co., Inc., then reviewed the various decisions by the ICC and the courts in which the distinction between private and for-hire carriers was at issue and in which efforts had been made "to restrict the legal rights of private motor truck owners to transport their own property in their own vehicles incidental to the conduct of their own primary businesses."

Hope for Clear Decision

GEORGE FAUNCE, JR., vice president of Continental Baking Co., next cited the four important proceedings now pending before the ICC which could "materially affect the basic rights and privileges of every private motor truck owner for many years to come." He expressed the hope that the ICC, through its decisions, would "settle all further controversy by issuing a definite, clear-cut and sensible ruling as to just what does and does not constitute 'private carriage' according to the intent of Congress when it enacted the Motor Carrier Act."

T. A. Drescher, of the Milk Industry Foundation, discussing the contentions of for-hire carrier interests, stated that "in the light of the realities of business there can be no so-called 'for-compensation test' to distinguish between private and common or contract motor carriage. The inclusion of a compensation test in determining the status of a private carrier goes much farther than regulating a businessman's transportation of his own property. It is upsetting, rearranging and generally confusing the traditional merchandising practices of many industries which, because of the nature of the commodities hauled, the pricing system in vogue and the market conditions existing, rending it more practicable and more equitable to customers and others to quote f.o.b. price plus a reasonable cost of delivery."

More than 200 representatives of many types of business employing private trucks attended from all sections of the United States.

Haley is President

H. V. HALEY, general traffic manager of P. Ballantine & Sons, was re-elected president. John B. Pymer of the City Baking Co., Baltimore; Leo Huff, of Pure Oil Co.; P. H. Ducker, of the Automotive Council of Los Angeles, and E. M. Fetherston, of Colonial Stores, Inc., Norfolk, were elected regional vice presidents. R. C. Hibben, International Association of Ice Cream Mfrs., was re-elected treasurer.

The Board of Directors is as follows: P. Arnold Anderson, Fred Brenckman, O. A. Brouer, C. S. Decker, T. A. Drescher, C. J. Fagg, George Faunce, Jr., D. C. Fenner, S. L. Foote, A. B. Gorman, A. M. Grean, Jr., A. H. Kreuder, H. O. Mathews, F. E. Molin, R. J. O'Hare, L. F. Orr, John J. Riley, R. S. Robie, Chas. H. Ruth, G. H. Sibley, J. W. Sinclair.

END

(Please resume your reading on P. 74)

Yes, LAMSON *Efficiency* COTTERS

can save the automotive mechanic plenty of headaches—to say nothing of lost tempers. Their "drift-pin" action helps align parts easily and quickly, and because one end is extended, they're easy to spread apart.

If you've had cotter-pin fumble trouble, remember . . . *use* LAMSON'S INSTEAD, THEY'RE EASY TO SPREAD!

Prompt Delivery of Most Sizes

THE LAMSON & SESSIONS CO. • 1971 W. 85th St. • Cleveland 2, O.

Plants at Cleveland and Kent, Ohio • Chicago • Birmingham

AUTOMOTIVE FASTENERS

LAMSON & SESSIONS

Ask your distributor for the Lamson Line

SEALED POWER HEAVY DUTY PISTONS

now comprise the longest line in the industry!

FEATURING

- **RUGGED INTERNAL CONSTRUCTION**
  for long life in heavy-duty service with extra material added for correct heat transfer and extra strength
- **FINEST LO-EX* ALLOY**
  used exclusively
- **CAM GRINDING**
  assures correct shape and increased bearing area at operating temperatures
- **T-SLOT DESIGN**
  for lower and more uniform temperature throughout piston

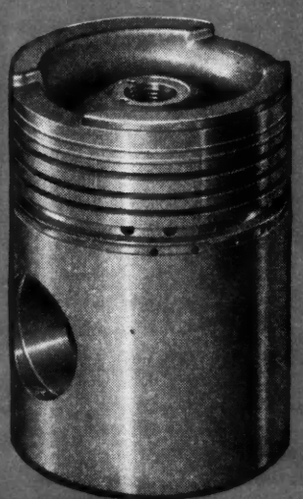
...and now including

a new Sealed Power sleeve assembly for Cummins Diesel featuring the new *forged aluminum piston* with

- **37% greater tensile strength**
- **39% greater yield strength**
- **16 times greater elongation strength**
- **15% greater thermal conductivity**
- **60% better fatigue (flexing) strength**

Made exclusively from LO-EX* Alloy

*A trademark for pistons cast and alloys produced exclusively by The Aluminum Company of America



SEALED POWER CORPORATION

MUSKEGON, MICHIGAN · IN CANADA: STRATFORD, ONTARIO

Maintenance Beyond the Book

(CONTINUED FROM PAGE 62)

On all of our units the "Glad-Hand" air line connection has been removed and replaced by a simple "push-in" coupler. The same type of coupler used for the air hose at service stations.

The connection can be made in a third the time with this coupler. There is no way that the driver can start off with his air turned off the trailer—if the connection is made, the air is on. It is a simple correction.

We also streamlined our air line connections all the way along the line by eliminating turns and substituting larger valves. The results (which were summarized in the July CCJ, pg. 40) materially reduced brake lag time.

THIS NEW BABY IS TOUGH!

Sure this new baby is *tough.* Like all ASF Safety 5th Wheels, the new Series 400-C has *proved* its rugged stamina. After a *year and a half* of field testing, Chuck Zimmerman, twice winner of the National Semi-Trailer Championship, says, "It's the *best* 5th wheel made."

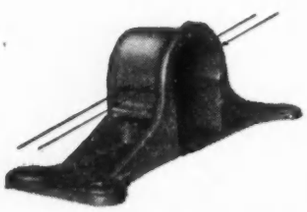
LARGER TRUNNIONS ...ADDED CONVENIENCE

This new wheel puts an end to bracket troubles. Large trunnion bearing surfaces—*not pins*—take trailer weight and tractor pull. And *you don't need a mounting plate* when used on a standard 34" tractor chassis. It's a balanced installation—34" frame, 34" bracket spacing, and either 34" or 36" plate width.

SAFE AND DEPENDABLE

Get the facts about this new design that not only retains *all the features* for which Safety 5th Wheels are famous, but adds *new ones* as well. Write today for Folder 102. Automotive Division, American Steel Foundries, 400 N. Michigan Ave., Chicago 11, Illinois.

The new Series 400-C. Dealers and distributors wherever you go.



Sockets on the plate fit well down over the trunnions so that tractor *pull* is transmitted in a *straight line.* Plate won't "lift" under power or braking.

A·S·F Safety 5th WHEEL

AGAIN working with the Oregon Motor Transport Association and the ICC, we have made a number of tests designed to prove or disprove the efficiency of front wheel brakes on multiple axle vehicles.

For making these tests we purchased a Wagner electric stop meter and arranged the rigging so that we could take motion pictures of the readings.

We put this meter on our own equipment and other operators' equipment and ran a series of tests with and without front wheel brakes.

As a result of our tests and study we are convinced of the following:

1. Front wheel brakes are dangerous on wet or snowy roads. When you lock the brakes you have a sled, not a truck. A sled which you cannot control.

2. Applied to truck and trailer, and semi-combinations, our tests proved that the time lag was greater with front wheel brakes. Or, that the truck would stop as quick or quicker without front wheel brakes.

3. There is a definite weight savings of approximately 200 lb. in doing away with front wheel brakes.

4. There is a substantial maintenance savings when front wheel brakes are eliminated. Consider that it costs $50 to align an axle and the average jobs required is one a year.

5. The problem of equalization has always been difficult with front wheel brakes. The least bit of water or oil on the brake lining or drum will produce an uneven application and a resultant pull to one side or the other.

6. With no front wheel brakes there is a substantial tire savings. We estimate this to be at least 20 per cent. Our tire operation record shows that we get an average of 40,000 miles without brakes. We get from 20,000 to 30,000 miles on the same tires when front wheel brakes are used.

Metal Oil Seals

THE standard equipment leather oil seals which we formerly used for worm shafts and pinion shafts on double reduction assemblies, lasted us but a few thousand miles.

To this we applied the old principle of the oil plunger used in transmissions for years. Our new seal consists of a metal bushing or collar mounted on the shaft just inside the

(TURN TO PAGE 144, PLEASE)

On-the-side, Mister!

Blackhawk Jacks give you extra utility!

Here's an angle on Blackhawk Jacks that spells plus uses for you. Because of exclusive pump-on-side design, Blackhawk Hydraulic Jacks not only lift, but also deliver full power at any angle, vertical to horizontal. That's why Blackhawk Jacks give such dependable and unmatched service on the road and in the shop. When you need jacks — buy the best — buy Blackhawks from your Blackhawk Jobber.

A Product of **BLACKHAWK MFG. CO., Dept.** **Milwaukee 1, Wisconsin**

"Service Proved"

These 7 Big Features Give You More For Your Money

LESS WEAR—LONGER LIFE! Exclusive "Mirror-finish" on cylinders reduces plunger cup wear.

POSITION MORE EASILY! Sled-type base "skiis" over uneven surface for quick placement.

TIP-PREVENTION! Load is automatically centered over the base — plunger is dead center.

EASY MAINTENANCE! All valves under one cap screw. No dismantling of jack to clean valves.

LONGER PUMP LIFE because housing is smoothly machined steel cylinder. Easily replaced.

PERMANENTLY SHARP, sure-grip heat-treated saddle. Serrations cut by machine, not cast.

FULL POWER ON SIDE! Original pump-on-side feature permits horizontal floor-level use.

BLACKHAWK

Maintenance Beyond the Book

(CONTINUED FROM PAGE 142)

housing, with threads cut in it to run the oil back into the rear end. There is no wear-out to this installation. It will last the life time of the unit providing there is no bearing failure.

We figure since we have installed these threaded metal bushing seals our savings in parts and labor may well run over $1,000 for a 100,000-mile operation.

There can be no loss of oil with this seal. With the leather seal, when you "scatter" it usually causes a tow-in and from $300 to $500 for labor and parts.

Sleeve Seat Reamer

WE also make a great deal of our own shop equipment. Here is an example. Recently on a diesel engine the block became worn at the sleeve seat so that the sleeve was below the surface of the head. This allowed the sleeves to leak water

To correct this we made a reamer to ream and true the sleeve seat in the block and then used shims on the sleeves to make them the right height. In making the reamer, we designed it with a pilot at the bottom of the bore in order to assure proper alignment.

We use the engine exchange plan. We have an engine break-in stand which was designed and built in our shop. It has an electric retarder which puts load on the engine. With this we are able to condition an engine at the time of rebuilding, ready to take the load. We have found that by following a policy of shop break-ins on overhauled engines we are able to substantially bring up the individual truck use factor.

We have developed specialized welding equipment particularly adapted to our own work, which includes heavy petroleum tank equipment.

The list could go on and on. Our overall policy is this: If we cannot buy the shop equipment which we need, we make it. This policy served us unusually well during the war. We see no reason for changing it today.

And by the same token we are continuing to give priority to our *second kind of maintenance.* We are working on half a dozen corrections now which we hope will give us a lower operation cost, a safer operation, or better our public relations program. When these have been tested and proved we shall be glad to pass them.

END

(Please resume your reading on p. 63)

To the Man Responsible for Protecting Vehicles and Premises *against fire*

WITH replacement costs soaring, your responsibility becomes greater than ever. It's time to double check fire-fighting equipment in every vehicle, in every garage location.

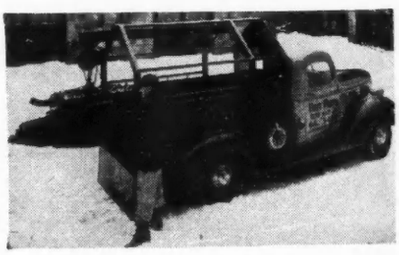
Is every vulnerable point covered, and by the right type of extinguisher? . . . . Is every extinguisher freshly charged, ready for instant action?

There is a size and type of Buffalo *better-built* Fire Extinguisher exactly suited to every fire hazard. Your thoroughly-trained Buffalo representative will be glad to check with you and make recommendations if you need additional equipment. If he isn't listed in the classified section of your telephone directory, please write us direct.

BUFFALO better-built FIRE EXTINGUISHERS

BUFFALO FIRE APPLIANCE CORPORATION
DAYTON 1, OHIO
EST. 1895

Handy Loader



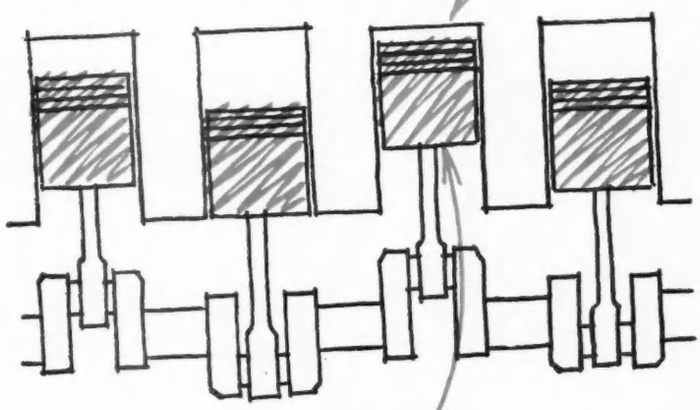
Here's a new solution to heavy-duty hauling. This all steel body mounted on a G.M.C. truck chassis was designed and built by Homer Campbell, machine shop manager of Unit Parts Corp., the NAPA Buffalo Warehouse, to expedite pick-up and delivery service on heavy engines, dual truck wheels and brake drums and other heavy automotive assemblies. A heavy steel frame was built to support a retractable I-beam that forms a rail for an overhead chain hoist to ride out

LUBE MEMO

Engine overheating caused by stuck rings

Compression loss 30%

400 400 280 400



Hot blowby gases burned piston.

Shop found rings in #2 badly stuck by ordinary oil (blowby has been wasting power).

Foreman claims RPM DELO Diesel Engine Lubricating Oil's compounds will prevent stuck rings 3 ways:

1. Decrease carbon
2. Stop formation of gum.
3. Hold contaminants in suspension (they're flushed out on oil change).

Give shop go ahead on RPM DELO Oil

DIESEL ENGINE RPM DELO LUBRICATING OIL

STANDARD OF CALIFORNIA • San Francisco, Calif.
THE CALIFORNIA COMPANY • Denver, Colo.
THE CALIFORNIA OIL COMPANY • New York
STANDARD OF TEXAS • El Paso, Texas

Safe Driving Quiz

(CONTINUED FROM PAGE 54)

this is just what we are aiming at.

Indoctrination is held in a large room equipped with a long table, chairs and a blackboard on which we illustrate points of our discussion. There is something of the morgue atmosphere in this room as we set it up which comes from the display of newspaper pictures showing dead men lying in wrecked cars or trucks or lying dead on the pavement; killed because of careless driving. We display clippings of the latest accident statistics (Fig. 4). Several times during the day we draw the attention of the applicants to these statistics and gruesome pictures. They always look at them and often get into a discussion about accidents and their causes.

Invariably they arrive at the conclusion that it is better to drive carefully and stay alive than to play the fool and wind up as a corpse.

The Safety Director starts off this day of indoctrination by taking from half to three-quarters of an hour for a single applicant to two hours for a group to go through a series of booklets. These consist of booklets on "Safe Practice Rules," and "Drivers Rules for the Prevention of Accidents," both published by the Insurance Dept. of National Dairy Products Corp.; "A Digest of Detroit Traffic Regulations," by the Detroit Police Dept., and a booklet "What Every Driver Must Know," published by the State of Michigan.

One object of the indoctrination is to find out what the applicant knows about driving and safe driving practices, and to see what mistakes he makes so we can try to correct them.

We explain that most people have driving shortcomings that they may not be aware of. It is pointed out to the applicant that any attempt at correction we make are made to further his personal safety; and as he becomes a better and safer driver the company will then also benefit.

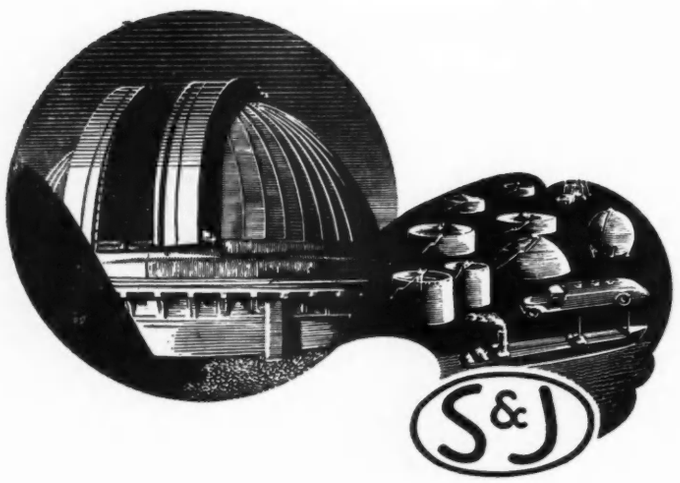
To illustrate the points in the various booklets we use a large 3 x 4 ft. Masonite board laid on the table (Fig. 3, pg. 54). This board is painted white with Masonite plaques painted green to represent streets, alleys, curves, double boulevards, city blocks, curbs, etc.

As we go through the various good and bad driving prctices we move toy cars and trucks about on this board. The Safety Director questions the applicants and also has them make moves on the board.

Having gone through the booklets and made his points clear by illustration on the board the Safety Director then gives a talk on the general safety practices of the Detroit Creamery. He warns of the accidents incidental to the business unless care is taken, such as cuts from broken glass; getting cut by possible jagged metal snags on trucks or wagons; stepping out on the traffic side of the vehicle; the occasional cut coming from handling bad milk cases and other similar items.

The Safety Director questions the applicants on their own accident record; shows them why the accident happened and how to avoid similar accidents in the future. Often other applicants enter the discussion, creating even more interest in safe driving.

(TURN TO PAGE 148. PLEASE)



SYMBOLS
OF
SAFETY

S. & J. are the initials which appear on petroleum tank fittings in all parts of the world, and everywhere they have the same significance. They stand for the MAXIMUM IN SAFETY, no matter whether they protect the flammable liquids in a truck tank compartment, an oil tanker, or a giant sphere or spheroid.

For many years S. & J. Internal Safety Valves have been used by many of the major marketers of petroleum products to insure maximum safety during transportation on the public highways. S. & J. Safety Valves are available for handling both liquids, and liquefied petroleum gases. Inquiries are always welcomed.

SHAND & JURS CO.
BERKELEY, CALIFORNIA

NEW YORK CHICAGO HOUSTON LOS ANGELES SEATTLE

SHAND & JURS

Every Truck Operator
owes it to himself
to discover the low
cost-per-mile of
Pennsylvania Truck Tires

PENNSYLVANIA TIRES

PENNSYLVANIA RUBBER CO.
PENN-CRAFT PARK • JEANNETTE, PA.

PENNSYLVANIA TIRES

The Fifty-Year-Old Name with the Great New Tires

with an

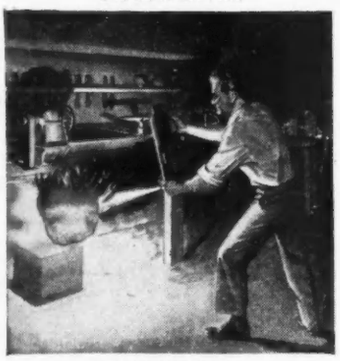
THE MASTER OF FLAME
ANSUL*
*REG. U.S. PAT. OFF.
FIRE EXTINGUISHING EQUIPMENT

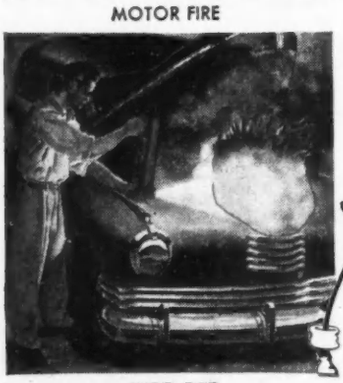
4

DRY CHEMICAL
FIRE
EXTINGUISHER

the small extinguisher with the
MIGHTY PUNCH

OIL BURNER FIRE

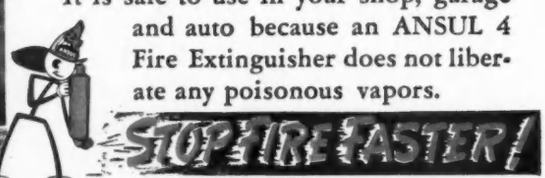

MOTOR FIRE


AUTO FIRE

Here is the fire extinguisher that gives you more protection against fire damage than any other extinguisher of comparable size . . . because it STOPS FIRE FASTER.

Its MIGHTY PUNCH means the average person can use the ANSUL 4 Fire Extinguisher effectively by merely following the simple directions.

It is safe to use in your shop, garage and auto because an ANSUL 4 Fire Extinguisher does not liberate any poisonous vapors.



MADE BY THE MANUFACTURERS OF ANSUL DRY CHEMICAL FIRE EXTINGUISHERS, MODELS 20, 30, 150A AND 350A.

ANSUL CHEMICAL COMPANY
FIRE EXTINGUISHER DIVISION, MARINETTE, WISCONSIN

Safe Driving Quiz

(CONTINUED FROM PAGE 146)

Training Supervisor Takes Over

AFTER the Safety Director gets through with the applicant he turns them over to me as Driver Training Supervisor. Our first step is to read a brief history of the growth of the company. We want men to become interested in the business of their future employer and to know something about it. After this we ask the men to relax and smoke awhile. It's at this point that we draw attention to the gruesome pictures and accident-statistic clippings which we have placed along one wall. The pictures always arouse comment.

After the rest period the next thing is a 10-minute written quiz on "How Much Do You Know About Safe Driving?" This form, which we have prepared, asks 20 questions concerned with various facets of driving. Little spaces after each question allows the applicant to make a check mark with pencil for what he believes is the correct answer. (Reproduced in full on pages 52 and 53.)

We have still another form asking still more questions. This form, the "Standardized Test; Traffic And Driving Knowledge; For Drivers of Motor Trucks," is prepared by the Pennsylvania State College which is road training consultant for the AAA.

I grade and mark these papers and pass them back to each applicant. Where questions are answered wrongly we go through it point by point often using the blackboard to illustrate the correct answer and why it is the correct answer!

Physical Limitation Tests

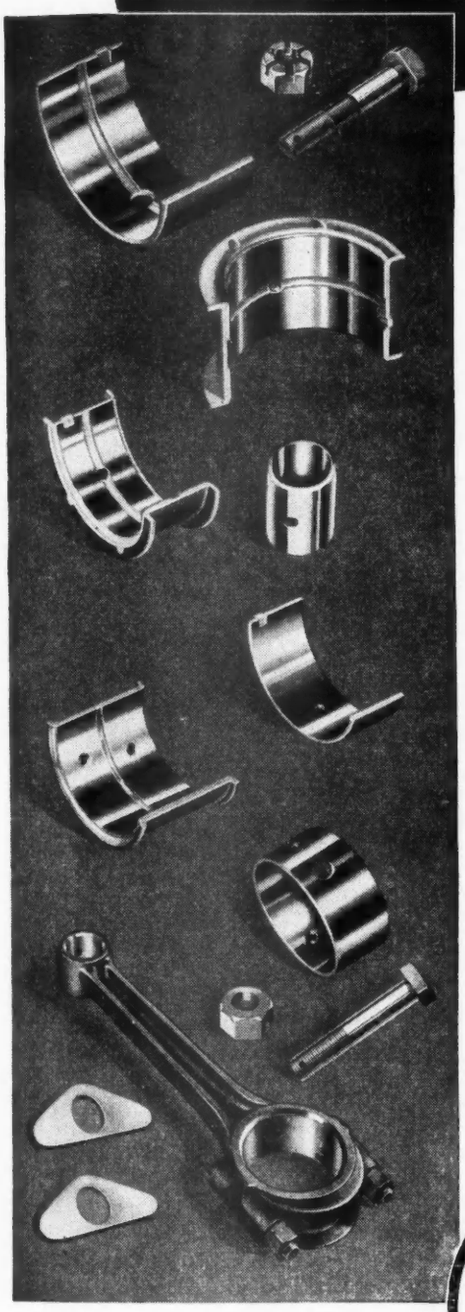
AFTER this question and answer period I set up on the table equipped with physical limitation test instruments (Fig. 3, pg. 54). These are instruments devised to test the applicants' various physical limitations. They are made in our own woodshop from blueprints supplied by the AAA and the Pennsylvania State College Institute of Public Safety.

Many other Detroit firms come to our Indoctrination room with their own driver applicants and administer the tests using our instruments.

The instruments, as we line them

(TURN TO PAGE 150, PLEASE)

JUST ONE CALL FOR ALL YOUR BEARING NEEDS!



Ask Your Federal-Mogul Jobber

There's a saying experienced fleet maintenance men use when talking about unusual or hard-to-get service bearings: "If you can't get it from Federal-Mogul, you can't get it anywhere." It was true ten years ago and it's true today . . . that's why we maintain the 100% complete line of almost SEVEN THOUSAND numbers!

All of our bearings are manufactured under strict quality control in our own six modern plants and they are readily available through jobbers everywhere—including bearings for those old-timers that go 'way back! You need make just ONE CALL for ALL of your bearing needs—popular numbers, current models and the seldom called-for numbers—ask your Federal-Mogul jobber!

FEDERAL-MOGUL SERVICE, COLDWATER, MICHIGAN
DIVISION OF FEDERAL-MOGUL CORPORATION

The Complete Line — Almost 7,000 numbers:

Engine Bearings • Bushings • Connecting Rod Exchange • Reconditioned Connecting Rods • Rebabbitted Connecting Rods • Connecting Rod Bolts and Nuts • Bearing Metals • Laminated Shims • Solders.

When Performance Goes up in Smoke

Replace in Sets with Genuine

FEDERAL-MOGUL

Oil-Control Bearings

Safe Driving Quiz

(CONTINUED FROM PAGE 148)

up on the table, make an impressive showing and they certainly do impress the driver applicant as he moves from one to the other taking his tests. These instruments test for field of vision; for night vision, including glare resistance and recovery; for distance judgment; for steadiness of hands and nerves; and for color discrimination. If it so happens that at this point the applicant discloses that he would never make a driver we would want, he drops out.

Advanced Driving

AFTER this physical limitations session we discuss advanced driving practices such as: city, country and highway, dry roads, wet roads or rain, icy roads, deep snow, fog, hills, curves, brake failure, blowouts, off shoulder, passing, overtaking or meeting, intersections, double-clutching, gear-jamming, abrupt clutch, etc.

We also discuss and illustrate feet traveled per second at any speed and relate it to "reaction time" and stopping distance. We tell the applicant of the quick way to change speedometer readings into approximate feet traveled per second . . . just multiply the speed indicated by 1½ which equals feet traveled per second.

After this we make our "Repair Shop Observation" where we point out and explain briefly the mechanical features of vehicles and the symptoms that indicate trouble. These mechanical features include instruments, control levers, motor noises (valves, bearings, fan, generator, water pump), clutch noises, transmission, differential and wheel bearing noises, looseness, shimmy or weaving in steering, and slack vibration in the drive shaft. We go into the various types of brakes, mechanical, hydraulic, air, air and hydraulic together, and so on.

We point out the number of men and the amount of material it takes to keep equipment running and point out the need for conservation of equipment and how a good man can help.

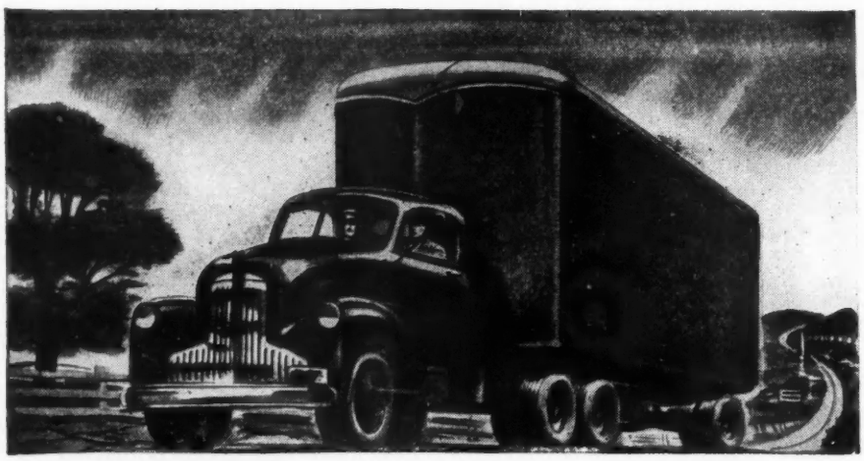
Actual Driving

NOW we are ready for the skill and aptitude tests where the applicant actually operates the kind of truck we want him to drive, be it over-the-road truck, tractor and trailer or light delivery vehicle. We go to the garage and get one or all of these various types of truck and drive them out to the training area maintained by the Detroit police department.

Our road test is an eight-mile course and includes all city driving conditions and hazards. As training supervisor I ride along with each applicant as he goes through the tests and watch him carefully. We watch for clutch riding. We use a brake reaction detonator to test his skill at stopping and how quickly after the alarm warns him he should apply the brakes. We fill in a special slip on the applicant on this particular test.

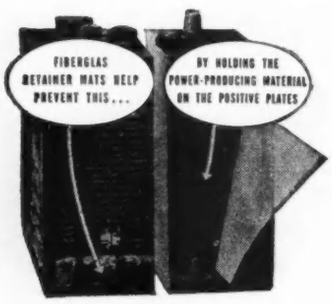
We have the applicant park, turn, stop on hills, and go through the complete routine. We see how well he can drive on a straight line forward and backward, how accurately he can gage close limits. We see if he can stop smoothly in 40 ft going 20 mph.

(TURN TO PAGE 170, PLEASE)



The BEST Batteries Save You Money!

A battery in heavy-duty service leads an "up and down" life—high mileage, constant overcharging, heavy drains—that only the *best* batteries can withstand. With heavier cases, bigger plates and *double insulation*, they save money because they help prevent lost time—keep costly equipment on the road. And you get extra value from batteries *double-insulated* with Fiberglas* Retainer Mats. Ask your battery supplier about them.



Here's How FIBERGLAS Makes Good Batteries Better!

Most battery manufacturers *double-insulate* their top-quality lines with Fiberglas Retainer Mats. These thin porous sheets, made of fine, flexible, interlaced fibers of glass, hold the power-producing material on the plates longer, add substantially to the life of batteries.

FOR LONGER, BETTER SERVICE...GET BATTERIES DOUBLE-INSULATED WITH

OWENS-CORNING FIBERGLAS

*Fiberglas is the trade mark (Reg. U. S. Pat. Off.) for a variety of products made of or with glass fibers by Owens-Corning Fiberglas Corporation, Toledo 1, Ohio.

These are the two advantages you'll hear most in talking with OSHKOSH users—and they're both important MONEY SAVING advantages.

Throughout the snow country OSHKOSH is Number One snow removal equipment. Then with equal efficiency it shifts over to construction, maintenance, and other necessary work. For thirty years it has proven its economy on long and short haul jobs in many fields, both on and off the highway.

Greater flexibility enables OSHKOSH trucks to pay their way every month of the year. Fine engineering, plus tough durable construction, **keeps** them on the job for many years with minimum upkeep. Ask any OSHKOSH user.

Write for descriptive literature.

OSHKOSH
4 WHEEL DRIVE TRUCKS

Service Stations at Convenient Points in U. S. and Canada.

OSHKOSH MOTOR TRUCK, INC.
OSHKOSH, WISCONSIN

CABLE ADDRESS: "OSHMOTOR" OSHKOSH

One of the latest models of Cen-Tennial beverage bodies. It is a four-tier design with streamlined rear compartment This Herman body carries 188 cases and mounts on a truck with 84-in CA. It is a four-deck type with depressed roof

Beverage Bodies for 1948 Take on That New Look

ATTRACTIVE styling, driver convenience, accessibility, rugged construction, and a wide range of capacities characterize the 1948 line of beverage bodies being offered beverage fleets. Most of the designs provide ample display surface across the top and on the rear panel. Several bodies also are equipped with sliding panels (some of which are removable) on which advertisements, trade marks, brand names, or operators' names can be prominently displayed.

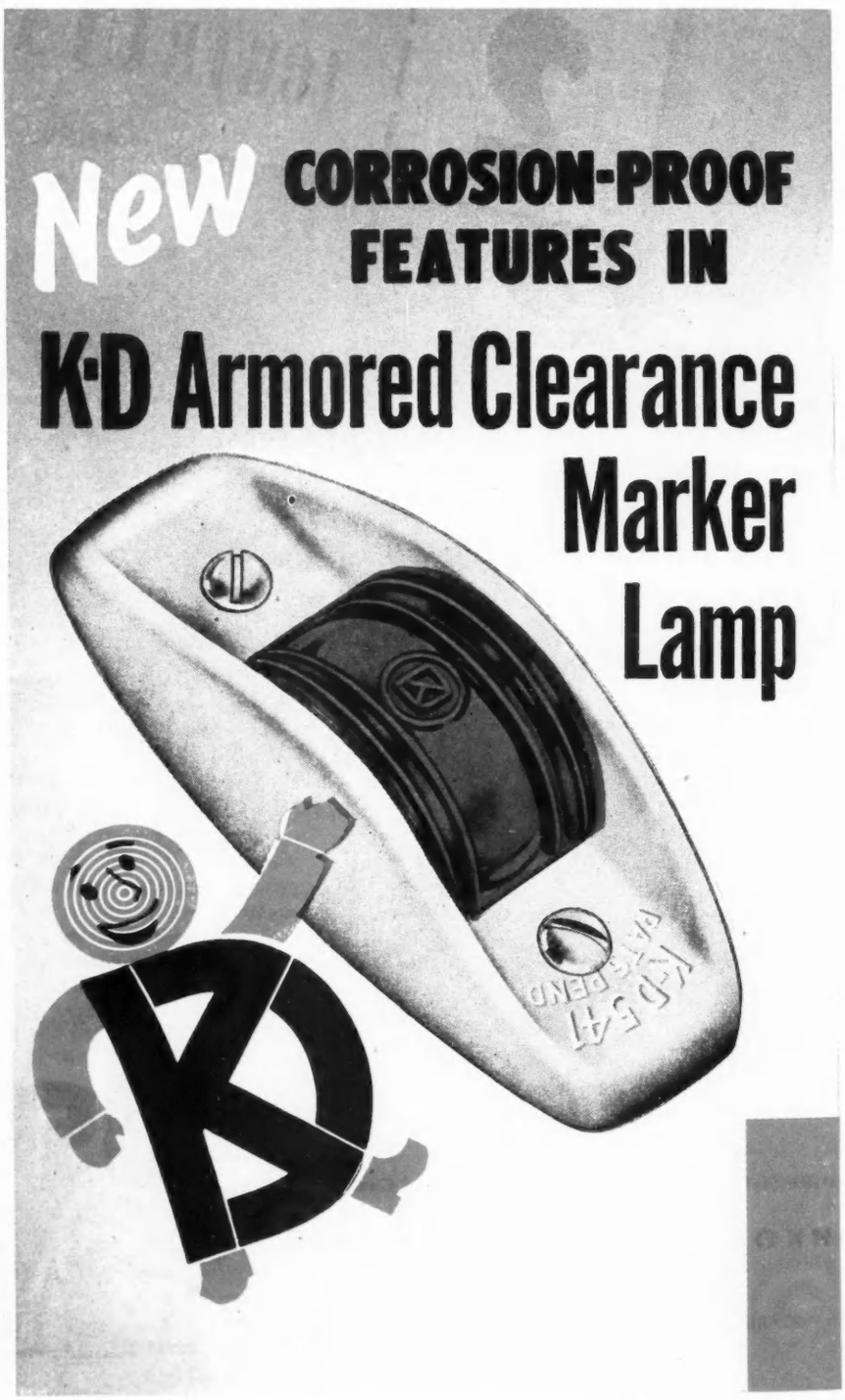
Blattmann-Weeser's "double ring" truss beverage body. Leading features are: Box-type rub rails all around, two steps, 18-in rear bumper, hand truck racks on both sides between cab and truck

Five-deck body by Hesse Carriage Co. It features smooth sides, sliding doors with "slam" locks, cases slide on T-rails, full-length recessed steps, and a streamlined rear compartment

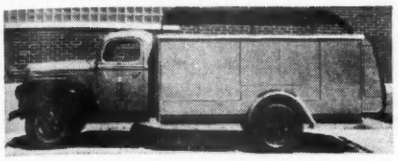
Convenient side steps, open or concealed, add to driver convenience and accessibility to cases on all decks. Several designs include compartments for racks, dispensing cabinets, and advertising material. One design even provides a rack for a hand trunk between the cab and body.

A wide range of sizes is offered in standard bodies. Some manufacturers also offer semi-trailers with construction features similar to the standard bodies. Standard deck arrangements run from three to five.

Most designs provide for ease of replacement of the various sections, if required



as a result of accidental damage. The designers also provided for ease of cleaning by eliminating closed corners and bulkheads on all decks.



One of the latest models of Specialty Engineering's line. Among the various features are smooth sides without extending hardware, full-length steps, and a streamlined rear compartment

FLEETMAN'S LIBRARY

BEST'S SAFETY DIRECTORY FOR 1948, a 494-page volume covering the entire field of safety, fire protection, first aid, etc. It shows what safety products or devices to use for specific hazards; how to use them; where to get them. The cloth-bound volume is priced at $5. Write Alfred M. Best Co., 75 Fulton St., New York 7, N. Y.

TRUCK BODY FOLDER, a 4-page brochure containing detailed information on the advantages of Lindsay truck body construction. A wide variety of Lindsay bodies are shown in full color. The Lindsay Corp., 1720 25th Ave., Melrose Park, Ill.

KNOCK-OUT CATALOG, a 24-page catalog illustrating and describing in detail all Knock-Out automotive maintenance equipment, tools, arc welders, etc. Write K. O. Lee Co., Aberdeen, S. D.

HALL-SCOTT SERIES 400, an 18-page catalog giving condensed specifications, installation dimensions and characteristics of the Hall-Scott 400 engine, gasoline and Butane. The catalog contains several pages of views of Hall-Scott equipped trucks for heavy-duty jobs. ACF-Brill Motors Co., Berkeley, Cal.

1948 REFERENCE CATALOG, describing and illustrating over 63 floor mats, pedal pads, engine mounts and rubber bushings, along with a condensed list of replacement data. Issued by Anchor Rubber Products, Inc., Cleveland, Ohio.

HELI-COIL FOLDER, a four-page brochure describing the Heli-Coil screw thread inserts. Shows how they are used and advantage of this type of repair. Write Heli-Coil Corp., Long Island City 1, N. Y.

MAKE SAFETY PAY, a two-color circular giving details of the "Flohr" automatic radial guard for use on all portable horizontal tools. Tyler Kay Co., Inc., 775 Main St., Buffalo 3, N. Y.

TRUCK-BUS RIM MANUAL

Safety and cost factors place a heavy premium on mastery of recently developed techniques for mounting and removing tires from modern truck and bus rims, The Rubber Manufacturers Assn. asserted in announcing publication of a manual entitled Truck-Bus Rims—How to Remove and Mount Tires Correctly.

A section on proper care of rims and tire inflation notes that serious accidents have occurred through careless mounting of truck tires, through use of worn rings, improper seating in the locking groove, or the use of wrong rings. In the same connection, the manual attributes "most truck rim accidents" to carelessness and thoughtlessness in inflating a tire after it has been mounted. Noting that such accidents are "always serious, sometimes fatal," the manual itemizes a five-point safety procedure for inflation.

Tire manufacturers are distributing the manual in quantity to their dealers for use by truckers and are placing them directly in the hands of large fleet operators. Individual copies may be obtained from the Association for 10¢ each, postpaid.

BASE PLATE
LAMP SOCKET AND
SCREWS NOW MADE OF BRASS!
Screws will not rust out! Screw threads will not rip out! Screws will not freeze up from rust! Lamp socket is corrosion proof. Entire base unit is now 100% rust-proof! What's more, the brass plate holds the screws as strongly as the old-type steel base plate, because the brass permits extrusion of the top hole in the plate to give a greater number of threads!
SPECIAL CLIPS
FOR QUICKER, EASIER HANDLING!
Two special clips hold lens and screw in place while making bulb replacements. No more dropping of lens. No more hunting for lost screws. No more juggling of parts. Mechanics love it!
TOUGH ARMORED HOUSING AND "LIGHTHOUSE" LENS!
The tough malleable iron housing protects lamp and lens from glancing blows of tree branches, walls and other vehicles. The "Fresnel" type lens gives greater visibility. Anchored fibre gasket seals out dirt and moisture. Rubber pad between lamp and body absorbs vibration. Socket plate held in place by four screws assures positive ground.
Makers of the most complete line of automotive safety products
THE K-D LAMP DIVISION
NOMA ELECTRIC CORPORATION
1910 Elm Street Cincinnati, Ohio

New Products

P201. New Pullers

(CONTINUED FROM PAGE 59)

Two new pullers—one for blind bearings and the other for storage battery terminals—have been developed by the Plomb Tool Co., Los Angeles, Calif. No. 1080, was designed for pulling Chevrolet, Ford and Packard pilot bearings quickly and without damage. However, it has a wide range of expansion and therefore has many other uses. Only two parts comprise this puller. The part which slips into the bearing has a shoulder on one end which grips the bearing. Four 2-in. deep mill slots allow the shoulder to expand after the puller is inserted and the second part, or screw, is turned. The screw has a ¾-in. hex head for turning with a wrench. It is also tapped for using a slide-hammer puller.

The battery terminal puller, No. 4041, work on any type of battery or terminal. According to the manufacturer it removes a terminal quickly and easily—even if badly corroded.

Use Free Postcard for More Details.

CLEAN DIRTY TRUCKS FAST!

with HYPRESSURE Jenny INSTANTANEOUS STEAM CLEANER

★ Cut Shop Repair Time in Half

★ Minimize Road Failures

★ Increase Pay Mileage

★ Lessen Fire Hazards

★ Promote Safety

HYPRESSURE JENNY cleans faster—*8 to 10 times faster*—more thoroughly and more economically than any other known method. Oil, dirt and grease *disappear instantly* from any surface when JENNY'S highly atomized mixture of steam, hot water and cleaning compound is sprayed upon it. Savings in time and money effected in the operation of garages, repair shops and maintenance depots, often pay for HYPRESSURE JENNY in a few months.

We'd like to send you complete information and prices. Why not write us today?

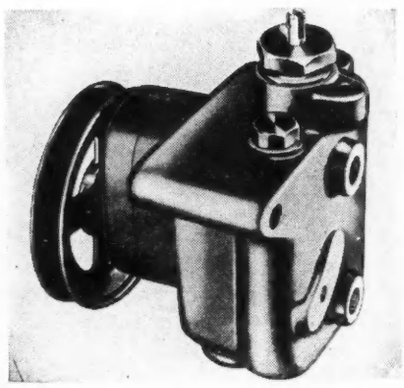
HYPRESSURE JENNY DIVISION OF HOMESTEAD VALVE MANUFACTURING CO.

P. O. BOX 90 CORAOPOLIS, PA.

P202. Hydraulic Pump

"Ten-Ton-Tony" is the name given to one of the latest developments of Hydro-Power Division, The Hydraulic Press Mfg. Co., Springfield, Ohio. It is a midget size hydraulic unit for use on such applications as arbor presses, hydraulic clamping vises, forming, straightening, and bending devices, light material handling units, small balers, pressure inserting equipment, railway maintenance operations. The hydraulic power unit measures 6 x 7 x 9 in. overall. It has a capacity of 3 gal. of oil per min. at 1200 rpm, at 1000 lb. per sq. in. or 4½ gal. per min. at 1800 rpm at 1000 lb. per sq. in. It requires approximately 2½ hp to operate at 1200 rpm.

Use Free Postcard for More Details.



P203. Cord Saver

A new cord-saver extension reel, the Port-O-Reel, has recently been developed by Industrial Electrical Works, Omaha,

Neb. This is a completely portable unit weighing less than 15 lb. without cord. It is designed to save time and cord to speed work on any application requiring extension cords.

This new unit prevents kinks and simple

(TURN TO PAGE 158, PLEASE)

Size Truck

RAYBESTOS HAS THE BRAKE LINING SET

★ Raybestos PGT brake lining sets, drilled and countersunk, are specifically engineered to meet the requirements of lightweight Service Duty vehicles . . . to provide the high coefficient of friction needed in the stop-and-go driving of service industries*. . . to give quick, easy truck relines at lower cost.

In these PGT sets, there is no blanket coverage, no one-lining-for-all. Raybestos builds each set to your size, weight, load and road requirements—with the right combination of all seven different brake materials.

Millions of miles and millions of users have proved Raybestos Heavy-Duty Brake Blocks give safe, sure braking action under every road condition.

Raybestos blocks do more than just "stop." They give *full-range* brake control—easy, positive *slow-downs* as well as quick, smooth stops. They're individually designed for each application according to truck manufacturers' specifications. Whatever your brake lining requirements, see your Raybestos jobber.

THE RAYBESTOS DIVISION
of Raybestos-Manhattan, Inc.
BRIDGEPORT, CONN.

★ SERVICE INDUSTRIES: Truck fleets of bakeries, florists, fuel dealers, contractors, dairies, department stores, utilities, laundries, cleaners, grocers, local manufacturers, etc.

New Products

(CONTINUED FROM PAGE 154)

knots by means of a cord-guide which level-winds the cord as it is re-wound on the reel. A substantial base and the low set of the cord-guide prevents tipping and a practical, specially-designed, ball-bearing swivel provides automatic alignment of the reel and cord with the operator as the cord is drawn from the reel. All units are equipped with a rubber ring on bottom edge of base to prevent scratching of floor surfaces and to prevent slipping.

Use Free Postcard for More Details.

P204. Power Cutters

Porter hand power cutters developed by H. K. Porter, Inc., Somerville, Mass., incorporate new degrees of ease, strength, safety and performance in the cutting of bolts, rods, wire, cable, chain, bars and metal. They now have curved toe-in handles which decrease armspread and wrist bend making an easier and stronger pull, broad rounded palm-fit grip which reduces fatigue, no protruding screws or bolts to catch, metal safety handle stop. 30 per cent greater tool strength in sections and handles.

Use Free Postcard for More Details.

FOR SAFER DRIVING

•

FOR GREATER CONVENIENCE

NORLIPP

Improved

TRUCK MIRRORS

Replacement MIRROR HEADS
No. 420—5" No. 442—6"

SIGNAL REFLECTORS

CLEARANCE LIGHTS AND SAFETY LIGHTS

The NEW ADJUSTABLE stop on the Norlipp Nos. 425 and 426 Truck Mirrors offers greater security of placement, yet wider flexibility in moving mirror for driving convenience. It holds mirror in exact position while driving, yet when truck is to be backed or driven into a narrow place, mirror and arm may be raised and then returned to former position without use of tools.

New cab mounting of one piece stamping adds durability to mirror. The diameter of telescopic arm has been increased to 5/8 inch. This larger diameter helps eliminate vibration. Water-proof construction—finished in durable baked enamel.

See your jobber for complete details

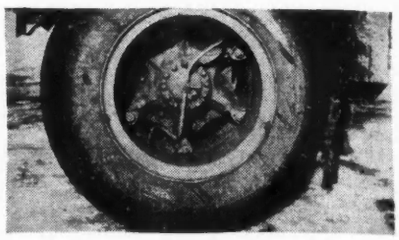
THE NORLIPP *Company*

5925 S. LOWE AVE., CHICAGO 21, ILL.

NORLIPP Reflects QUALITY

P205. Pressure Control

A means of equalizing the air pressure in dual tires for heavy duty trucks and tractors is offered by Mech-Air Dual Tire Equalizer made by the Mecha Finish Corp.,



Sturgis, Mich. The device is a simple arrangement which can be installed on any set of dual tires in a few minutes, according to the manufacturer. Once installed, both tires can be checked or inflated at one time through the single valve mounted at the center of the axle. It is claimed that the device guarantees an equalization of inflation pressure, hence assures an even distribution of weight on the tires.

Use Free Postcard for More Details.

P206. Metal Solder

Plasti-Kote Inc., Cleveland, Ohio, is introducing the new auto body solder. Available in putty form, the solder is applied cold from the can with a spatula or putty knife. It adheres well to bare, painted or lacquered metal surfaces. After being smoothed on and allowed to dry, the repaired area is sanded, ground or filed to a smooth surface. Then lacquer, paint, enamel or other finish that is desired is applied.

Use Free Postcard for More Details.

P207. Color Mixer

A new model of the "Color Meter Master" high-speed paint mixer for automotive use has been introduced by The Sherwin-Williams Co., Cleveland, Ohio.

An advantage of the new machine is a

coupler which permits continuous operation even when paint cans are being inserted or removed from the machine. The unit will mix up to six cans of paint simultaneously and is adapted interchangeably to either quarts or gallon cans.

The machine is powered by a ¼ h.p. motor for economy of operation. The machine is 30 in. wide and 24 in. high.

Use Free Postcard for More Details.

(TURN TO PAGE 160, PLEASE)

The Du Pont "Dulux" Way to
A PERFECT REFINISH JOB!

1. For quick, easy clean-up:

DU PONT PREP-SOL

Start jobs *right* . . . with a Prep-Sol clean-up! Prep-Sol slightly softens the old finish, quickly removes grease, tar and traffic film . . . prevents foreign matter being sanded into the old finish . . . promotes good adhesion of the new finish.

2. For *maximum* adhesion:

DU PONT PREPARAKOTE

Here's a primer that goes on easily, dries quickly . . . *and stays put!* It's specially formulated to work *with* DULUX in creating superior refinish jobs. PREPARAKOTE *speeds* the job along . . . you don't have to wait for it to "flash" between coats . . . and it's ready for final sanding in four hours.

3. For "smooth sailing" all the way:

"DULUX" PUTTIES and THINNERS

It pays to use the best with the best, that's why so many paint shop foremen specify DULUX all the way. DULUX Putties come in two grades, Glazing and Hard, for every type of putty job. DULUX Thinners are *reliable* . . . and help move work along. VARI-TEMP Thinner, for instance, can mean the difference between top efficiency and a "slow" shop on cold, damp days or in hot, muggy weather.

4. The finishing touch for beauty and durability:

DU PONT "DULUX"

The best judges of a finish's performance are the men who operate truck and bus fleets . . . and the men who keep them painted. Over the years the majority have chosen DULUX . . . on the basis of proved superiority *on the road!* They *know* DULUX stands for a better-looking fleet . . . and durability that stretches the time between repaints.

Yes, DULUX *all the way* is the formula for fleet finishing efficiency. E. I. du Pont de Nemours & Co. (Inc.), Refinish Sales, Wilmington 98, Del.

DU PONT
REG. U. S. PAT. OFF.

DULUX

REG. U. S. PAT. OFF.

Enamel

BETTER THINGS FOR BETTER LIVING
.. THROUGH CHEMISTRY

For Repairing and Overhaul

Clean with PERMAG

After this tough winter—and as spring opens, Service Stations will be rushed with work. Cars will need repairing, new parts and overhaul. Be ready for the cleaning process with PERMAG Compounds. There's a PERMAG Cleaner for every automotive cleaning job from the lightest touring car to the biggest truck.

- Degreasing
- Motor Cleaning
- Radiator Cleaning
- Steam Cleaning of Chassis
- Cleaning of Small Parts
- Washing Floors, Pits, Driveways

PERMAG COMPOUNDS work rapidly and with great efficiency and economy. Used in hundreds of garages and service stations throughout the country.

Write us for details on how PERMAG can help you in your work and add extra profits.

MAGNUSON
PRODUCTS CORPORATION

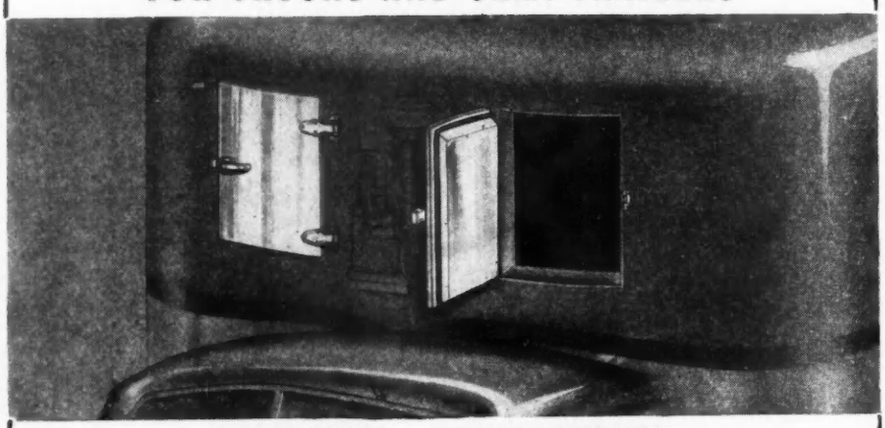
Main Office:
50 COURT STREET
BROOKLYN 2, N. Y.
Nationally Represented

Canadian Offices: Montreal - Toronto, Canadian PERMAG Products Ltd.

PERMAG

More than 340 Cleaning Compounds are now made under the PERMAG trade name to meet the growing demands of industry.

D&G
VENTILATOR DOORS
FOR TRUCKS AND SEMI-TRAILERS



SAVE TIME . . . SAVE MONEY
With Ready Built Ventilator Doors

Using D & G Doors you can equip your Trucks and Trailers with ventilator doors in a fraction of the time required to make and install a set of hand made doors.

D & G DOORS ARE COMPLETE AND READY TO INSTALL. They are fully insulated and built complete with all hardware, strikes, locks and with rubber gasket around the edge for tight air seal. They are ready for tight fitting installation.

AVOID TYING UP SHOP FACILITIES. The speed with which D & G Doors can be installed assures quick fitting work, getting equipment back in service in a minimum of time.

IN TWO STYLES. Available curved for front and flat for back.

DROMGOLD & GLENN 332 South Michigan Ave., Chicago 4.

New Products

(CONTINUED FROM PAGE 158)

P208. Cleaner Stand

The Tivit portable parts cleaner stand holds a standard 5-gal can of Kelite Formula 555—a new fire-safe, quick-acting cleaner—and a 5-gal rinse can.

The mechanic merely drops the grimy parts into the basket as they are removed from the job. After a short soak the basket is lifted out and dunked in the rinse can.

Hinged drop-leaves at each side provide extra table space when required. Size overall, 14 in. x 56 in—30 in. high.

Use Free Postcard for More Details.

P209. Pass Light

The new "OK-Pass-Lite" Model 425, manufactured by The Teleoptic Co., Racine, Wis., projects a bright green lighting of the words "Okay Pass," easily readable at a good safe distance. The driver merely presses a button. When he releases it, the light goes off.

Safe visibility is said to be assured by green signal lens of Kopp glass. Lamp is streamlined, with chrome door and hammerloid housing, both of heavy brass. Furnished complete with momentary contact switch.

Use Free Postcard for More Details.

(TURN TO PAGE 162, PLEASE)

IT'S GOT THE POWER

● For trucks and buses, Trico has engineered a special heavy duty Vacuum Wiper Motor with that extra power needed to keep wiper blades swinging under the toughest going. Continuous operation under load is provided by the auxiliary Reservac, now available in new economy capacities.

For trucks and buses equipped with air brakes or other air supply, the Trico AIR PRESSURE Wiper is the answer for heavy rugged duty.

TRICO Windshield Wipers

Trico Products Corporation, Buffalo 3, N. Y.

New Products

(CONTINUED FROM PAGE 160)

P210. Foot-Controlled Vise

The new model 610 Vi-Speed foot controlled vise developed by Van Products Co., Erie, Pa., is about 75 per cent heavier than the standard model. This greater mass with larger jaws and wider maximum openings permits the positive holding of larger castings, forgings and other pieces. Slight foot pressure rapidly closes or opens jaws and locks them in either position.

Convenient air regulator and gage provide jaw pressures ranging from zero lb to 50 times available air pressure. Adjustable safety screw permits quick limiting of vise jaw travel, preventing complete jaw closure and guaranteeing absolute safety.

Use Free Postcard for More Details.

P211. Bonding Oven

The Asbestos Manufacturing Co., Huntington, Ind., has developed two new ovens for bonding of brake lining. The latest development is a Uni-Fuse Process Infra-Red Oven.

The new AMCO Infra-Red furnace bonds brake lining in from 10 to 12 minutes, thus cutting the time usually required by the conventional convection-type furnace by two-thirds. No pre-heating is required, thus electric current is conserved between jobs, and waiting for the oven to heat is eliminated.

A new AMCO convection-type Uni-Fuse furnace features improved insulation, a specially-designed door which prevents heat escape, removable tray and grill, special basket in which shoes can be piled, and a signal light which informs the operator when the oven is up to the desired temperature.

Use Free Postcard for More Details.

For over thirty years, leading service managers and fleet owners have relied on Grizzly to provide fast, practical solutions to countless brake lining problems. Constant laboratory research, alertness to new developments and invaluable experience gained in over thirty years' manufacturing experience, place Grizzly in an excellent position to solve brake lining problems of widely divergent natures.

The next time you are faced with a brake lining problem, bring it to Grizzly—one of the largest, most dependable producers of fine brake lining for both automotive and industrial fields.

There's a Grizzly Distributor near you—call him today!
Grizzly Manufacturing Company, Paulding, Ohio

"Bear in Mind" . . . ask for

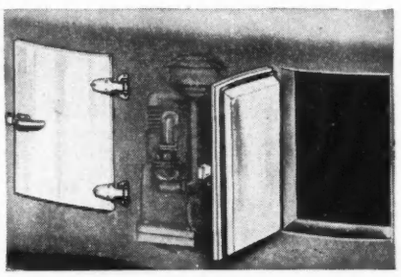
GRIZZLY

REG. U. S. PAT. OFF.

BRAKE LINING

P212. Refrigerator Equipment

Production-made ventilator doors for refrigerated trucks are now offered to the trade by Drumgold and Glenn, Chicago. Two styles, curved and straight, are furnished complete with chrome hardware, rubber seal gasket and are fully insulated.

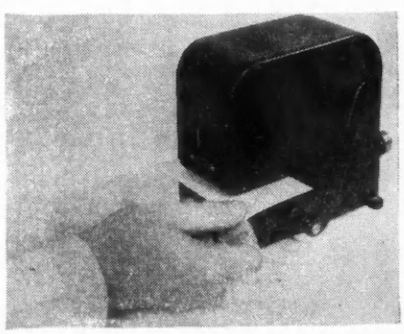


The company has also placed in production two small refrigerator units for both small and medium-sized trucks. Water ice or dry ice or both is used as a refrigerant. The units are equipped with turbine type blowers and 1½-hp. engines. The smaller size is 24 x 24 x 63 in. while the larger measures 40 x 24 in. and may be had in either 63 or 70 in. height.

Use Free Postcard for More Details.

P213. Power Recorder

Power-Recorder, developed by Square D Co.'s Kollsman Instrument Division, Elmhurst, N. Y., provides measurement of total



engine wear by recording the cumulative power-hour units turned out by an engine. It is to be used in determining the time for servicing of an engine and for increasing economy and efficiency in maintenance.

(TURN TO PAGE 164, PLEASE)

She has to take chances!
. . . YOU CAN PLAY SAFE!

When it comes to piston rings, playing safe means installing Koppers American Hammered Piston Rings in your trucks or buses. And remember this: American Hammered Porous Chrome* rings now are available for most truck and bus engines. Already, these amazing rings have established spectacular mileage records—delivered full efficiency during every record-breaking mile in millions of miles of the toughest kind of service. They reduce cylinder wear by half . . . increase piston ring life four and *even five* times. Ask your American Hammered jobber for Porous Chrome piston ring sets. Koppers Company, Inc., Piston Ring Division, Box 626, Baltimore 3, Maryland.

IN EVERY SIZE • OF EVERY TYPE • FOR EVERY PURPOSE

KOPPERS

American Hammered Piston Rings

*T.M. REG. U.S. PAT. OFF. KOLBY PROCESS

New Products

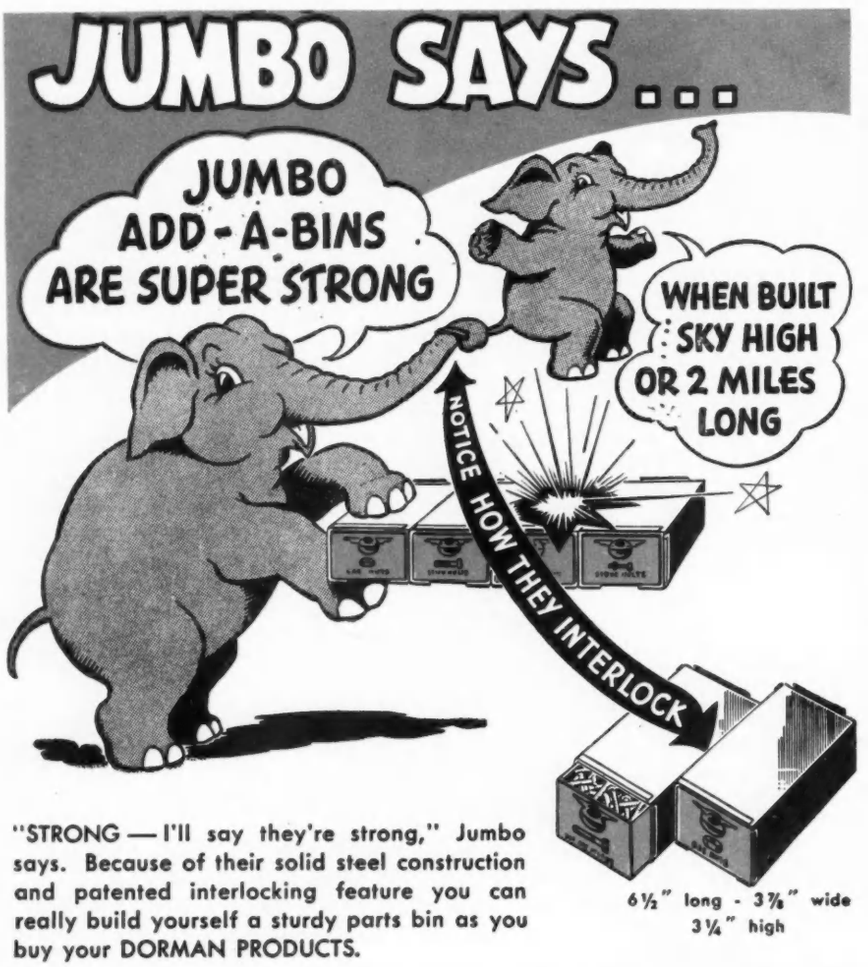
(CONTINUED FROM PAGE 162)

Thus, scheduling of maintenance overhaul periods can be based on the definite factor of engine wear rather than on some arbitrary number of operating hours.

This new device computes the total power-hours produced by continuously measuring the engine speed, manifold pressure and atmospheric pressure. Power data are obtained in accordance with the engine power curves. The rate at which the power units are registered is directly in proportion to the power-hours delivered by the engine.

Where there is no engine shaft tachometer, the Power-Recorder can be used with an adaptor on an accessory drive. For engines with a tachometer outlet, two types of Power-Recorders have been developed: one with a flexible shaft connection to the engine tachometer outlet and another a remote operating type which is electrically driven by a tachometer generator mounted on the engine tachometer outlet. The device can be calibrated in convenient multiples of horsepower-hours.

Use Free Postcard for More Details.



"STRONG — I'll say they're strong," Jumbo says. Because of their solid steel construction and patented interlocking feature you can really build yourself a sturdy parts bin as you buy your DORMAN PRODUCTS.

6½" long - 3⅞" wide
3¼" high

Remember when you buy your needed small parts in JUMBO ADD-A-BINS you are getting the metal storage bins at the same time.

Some of the many items available in ADD-A-BINS are Sheet Metal Screws, Brass Fittings, Cap Screws, Nuts, Lock Washers and Cotter Pins.

Your Automotive Wholesaler has them. As Jumbo says:

"THEY INTERLOCK!"

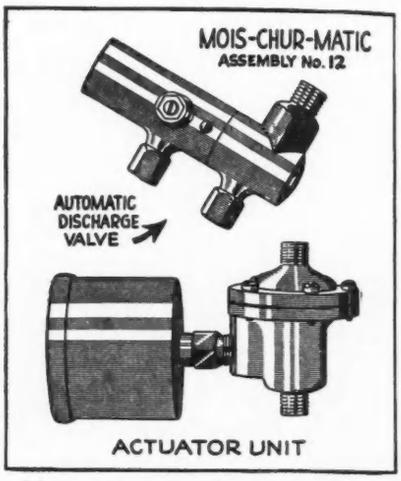
The Quality Line That's Easy to Find

DORMAN PRODUCTS

DORMAN PRODUCTS Inc.
CINCINNATI, OHIO

P214. Drain Valve

A new type automatic valve that blasts water, oil and sludge from the air brake systems of busses and trucks has been announced by Pneumatic Controls Corp., Des Moines, Iowa. Known as the Mois-Chur-Matic No. 12, the valve is designed for easy installation on all air-braked vehicles.



The unit is operated pneumatically and is said to remove all moisture and foreign substances as fast as they condense in the receiver tank. This eliminates the necessity of bleeding tanks and requires no other moisture traps or filters, according to the company.

Use Free Postcard for More Details.

P215. Hydraulic Press

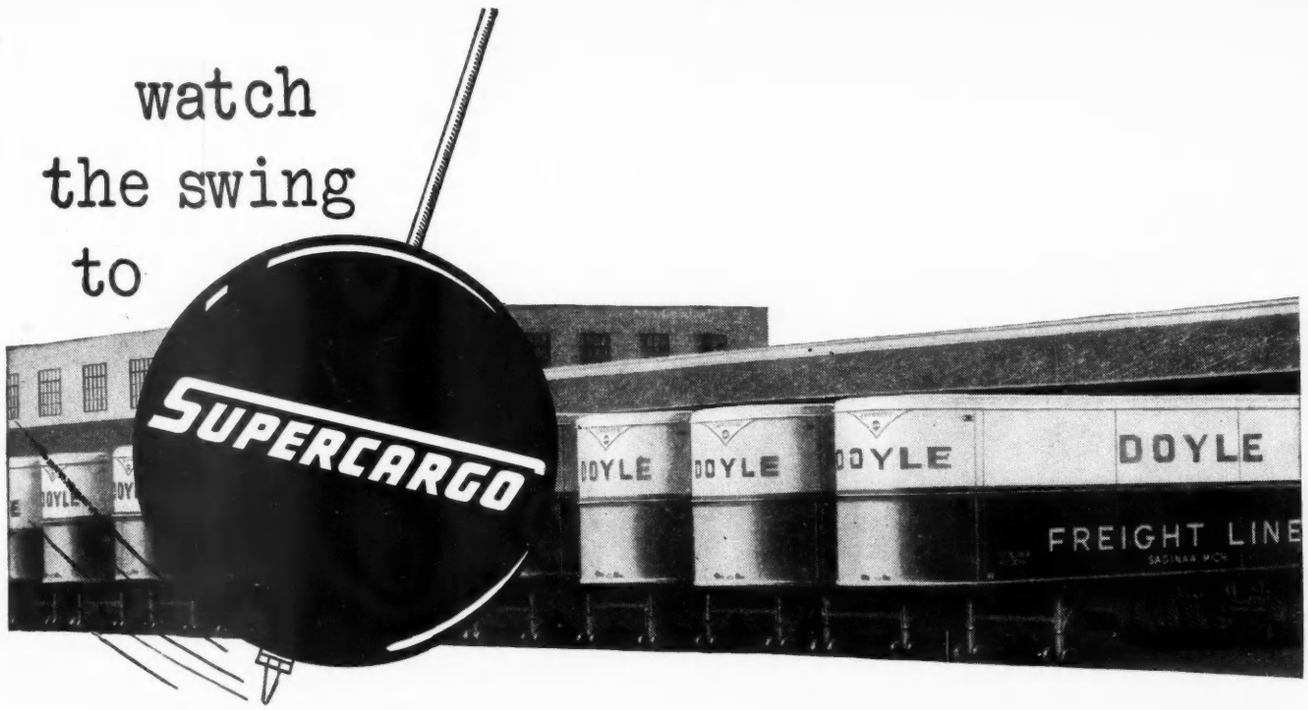
A new air operated 60-ton hydraulic press with movable head has been developed by the Manley Mfg. Div., American Chain & Cable Company, Inc., York, Penna.

The unit has a constant ram speed particularly suited to a variety of press work. It is safe, because the operator can direct all his attention on the work. Regular garage or factory air line of 150 lb. pressure supplies the power. Hook-up is an easy matter for any mechanic.

Operator can change over to hand operation at will—change speed of press instantly—or move head to either side of the press;

Use Free Postcard for More Details.

(TURN TO PAGE 232, PLEASE)



NOW... Doyle Freight Lines Swing to SUPERCARGO

From one stake rack truck and one driver in 1916 to three hundred modern units and eleven terminals in 1948, and still expanding—is the success story of "The Doyle Freight Lines" of Saginaw, Michigan.

In line with successful expansion and progress, this enterprising firm keeps eyes open for the most modern, efficient and economical in equipment. So, Doyle Freight Lines swing to Supercargo.

In 1947 forty-six Supercargo Trailers were purchased and are now in day and night service over the highways to the 250 cities, towns and villages in Southern and Central Michigan.

With successful operators' fleets it is more and more evident every day that *the swing is to Supercargo.*

3 REASONS WHY—

1 ***Advanced Design***—Supercargo vans are sturdy—built like a bridge—truss construction.

2 ***Engineered Construction***—The only trailers that have *flexible* torque arms and free-floating quadri-point spring suspension for smooth braking—easy pulling.

3 ***Production Line Economy***—Brings Supercargo users uniform quality trailers at low cost.

SUPERCARGO TRAILERS

MANUFACTURED BY

AMERICAN BANTAM CAR COMPANY, BUTLER, PA.

Fleet-Built Bodies

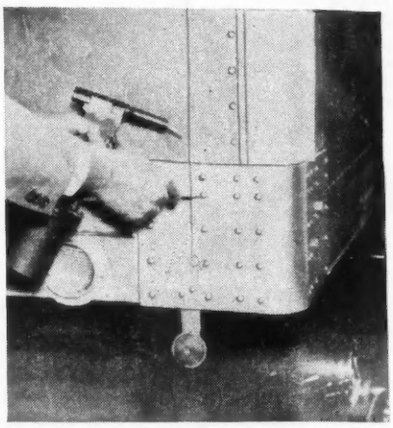
(CONTINUED FROM PAGE 55)

on the outer ends of cross members. We then rivet up the body corners. The rub rails which form the lower part of the side panels are fastened to the ends of the cross members, using four 3/8 x 1¼ in. bolts through the ¼ x 2 x 4 in. aluminum angles attached to the rub rail.

The roof slips into place easily and is riveted to end and sides. Two top corner braces or gussets are also riveted at the upper rear corner.

This finished, we are ready for the floor. We use 1⅝ in. tongue and groove T & G Douglas fir layed on cross members and fastened down with ¼ x 2 in. metal screws through the planks and into the cross channels. These screws go in very quickly with a screw dirver bit in a ½ in. electrical drill, 14 screws to each plank.

Over the floor we use 12-ft diamond plate, 48 in. wide, which is fastened with ¼-in. bolts. We have found that in handling freight pick-ups and local depot deliveries the men like the steel floor much better than the wood.



Rivet gun makes short work of the 600 odd Cherry rivets used on the job

We then put ⅝ x 3-in. slats of Douglas fir, spaced 3 in. apart, on the inside of side walls and end of body. These are fastened on with cherry rivets.

We now bolt on the four lower corner aluminum castings. All bolts used on the job come in a kit with the original knocked-down body at no extra cost. We now spray the floor and inside slats with a good wood filler. Then we cut a round hole in the bulk head that lines up with left side of oval glass in back of cab. This permits the driver to see when backing into loading platforms and van is empty or when freight is not piled too high he can use his rear vision mirror. You do not put anything over the hole—no glass or rubber—as it is so close to the back of the cab that no water ever gets in.

Four Advantages

FROM our experience with the three prefabricated jobs we are convinced that there are a number of strong advantages to doing this work in our own shop:

First—We keep a time record and over 60 per cent of all work on the five body jobs was done at odd times. On one body there were 21 time entries of from 30 minutes to 1½ hours. I do not contend that these odd hours and half hours would have been a complete time loss. But having the body job on tap allowed us to even our load and work through

(TURN TO PAGE 168, PLEASE)

SCHILLING CO. OPERATE FABCO DUAL DRIVE FLEET

In the construction industry, news travels fast. If it is good news concerning equipment, everyone is interested in getting on the band wagon. If something goes sour, everyone lays off. That is primarily what is behind the rapidly expanding use of FABCO DUAL DRIVES by prominent operators in the "ready-mix" industry.

Shown above is one of a fleet of Ford-Fabco Dual Drives, hauling 4½-yard Smith mixers, used by I. E. Schilling Company of Miami, Florida. They watched the performance of FABCO DUAL DRIVES in the fleet of another user in Miami, liked their ability to roll along the highway in conventional high gear, and of engaging the dual drive axle upon reaching the job, and having plenty of power to take the load to form-side. So they bought FABCO DUAL DRIVES on the basis of their performance in another fleet.

28 Years in this Business

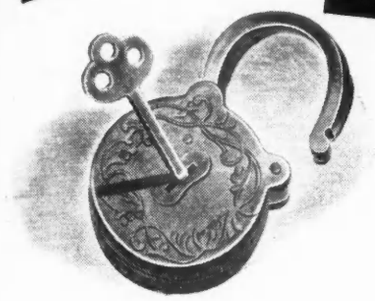
Fabco

F. A. B. MANUFACTURING CO.

1249 SIXTY-SEVENTH STREET · OAKLAND 8, CALIFORNIA

Dual Drives · 6 and 10 Wheel Units · Logging and Highway Trailers · Frame Extensions

PROTECT PERFORMANCE —



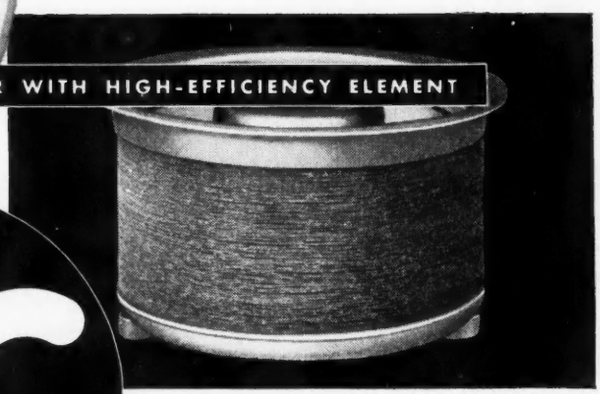
WITH THIS HIGH-EFFICIENCY GASOLINE STRAINER

Guard against road stoppages and lost time by keeping your *gasoline clean* with this new, high-efficiency AC Gasoline Strainer. It traps water, lint, dust, and abrasives. The "Fiberite" Disc Type Element is 100% non-abrasive, acidproof, waterproof, and rustproof. It protects and prolongs the life of carburetor needle valves, valve seats, and jets. It assures a constant and full flow of clean gasoline, and so promotes easy starting as well as reliable performance.

The AC Gasoline Strainer is simple to install and offers your vehicles protection whose value is far beyond its low price. The "Fiberite" Element is separately packaged, and easily replaceable, and the price is very moderate. Ask your AC supplier about the new AC Gasoline Strainer with high-efficiency "Fiberite" Element.

AC SPARK PLUG DIVISION • GENERAL MOTORS CORPORATION

AC GASOLINE STRAINER WITH HIGH-EFFICIENCY ELEMENT



HELP AMERICA PRODUCE FOR PEACE

AC *Gasoline* STRAINERS

★

Fleet-Built Bodies

(CONTINUED FROM PAGE 166)

with a full eight-hour schedule for each mechanic.

Second—We can get delivery on the aluminum and all other material needed and there is no delay in giving our fleet the new body. Three days will turn out a completed body if we all pitch in and it requires little extra time for the extras which always follow such an assignment.

Third—The drivers like the jobs better. They are actually tailor-made. The 14-in. hole in the front of the body so the driver can look back is an example. The addition of the diamond plate floor is another. We are now placing four 1 x 12s around the sides just above the floor in one job for special work. This came as a driver suggestion. In other words—when we build the job we can easily build it to the most convenient specifications and additions and corrections are quickly and cheaply made.

Fourth—There is a substantial cost savings over buying the completed job.

After the experience with our small delivery bodies, we are figuring on larger jobs and have costs and estimates on trailer units.

It is my belief that any small shop will find it profitable to do this kind of body work, especially when used for odd time work.

Our experience has been that such work, which for us includes complete engine reconditioning and running in, rear end and transmission make-ups for quick change, and a number of other similar jobs, all help to balance the shop schedule. It is not uncommon to lose an hour here and a half hour there. With standby work this slack can be taken up.

There is another advantage to this method. It works in reverse. If mechanics are working on a fill-in job and a rush job comes to the shop there is no unit road time loss in dropping the fill-in job and all hands turning to the immediate need.

END

(Please resume your reading on P. 56)

RUSCO Fused Fabric* PUTS POWER IN PLACE

Giant cargo truck and sleek sedan alike depend on Rusco's famous *Fused Fabric* for smooth, positive control of power from engine to transmission. Long identified with Rusco Clutch Facings, this patented material has no equal!

GENUINE RUSCO Engineered BRAKE LINING AND CLUTCH FACINGS

"The Standard of the Industry"

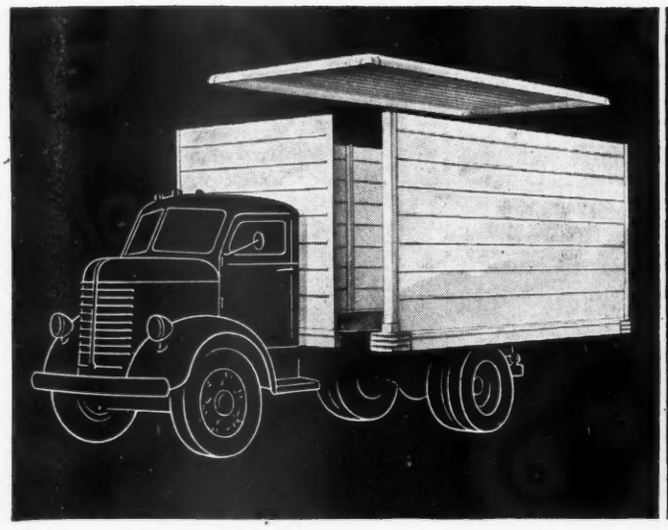
**Fused Fabric is a trade name of the Russell Manufacturing Co. and applies only to specific RUSCO products.*

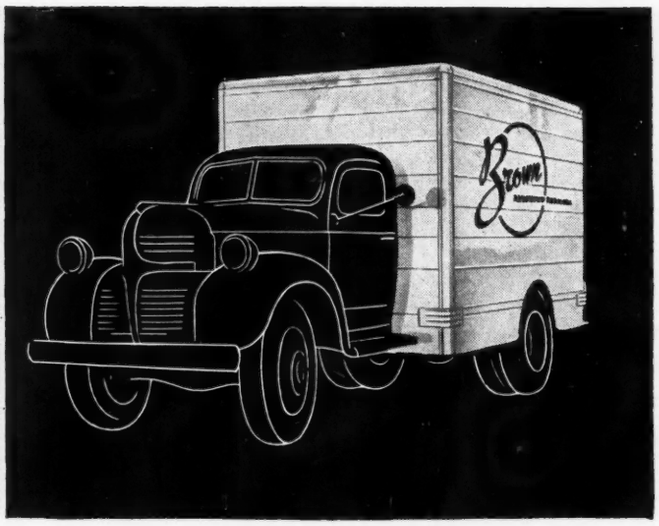
THE RUSSELL MANUFACTURING COMPANY, Middletown, Conn.

1948 Atlas Body

Atlas Body & Equipment Co., Phila., Pa., announces its 1148 forward control Stor-Dor delivery truck body. The conversion to forward control can be made by Atlas for any make truck chassis. These bodies are available in varying lengths from 9 ft. to 13 ft. back of driver's seat, height of body is 70 in., width of body 70 in. New features of the 1148 Stor-Dor body include a special engine cover for easier service work, an adjustable-tilting drivers seat, full 70 in. headroom for carrying load, safety tread floor plate used in driver's compartment. Bodies are available with full insulation for food transport. Plywood lining or slats are optional equipment. Racks for packages are provided as optional equipment for all service and trade fields. Replacements for damaged panels and corners are available from stock for fleet and dealer users.

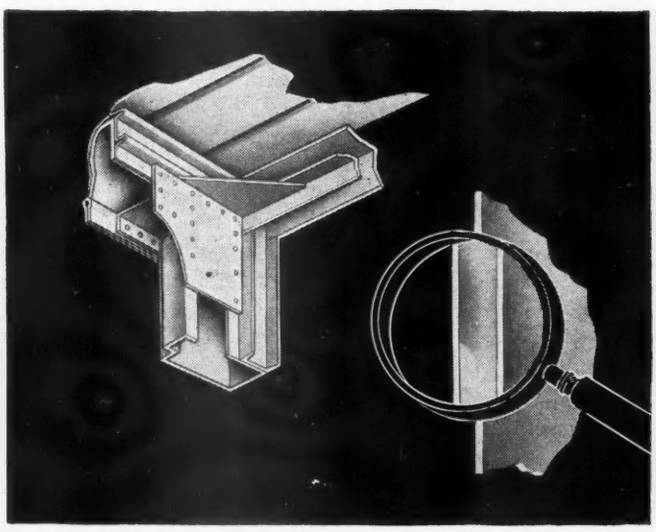
ONLY BROWN ALUMINUM CARGO VANS GIVE YOU ALL THESE FEATURES

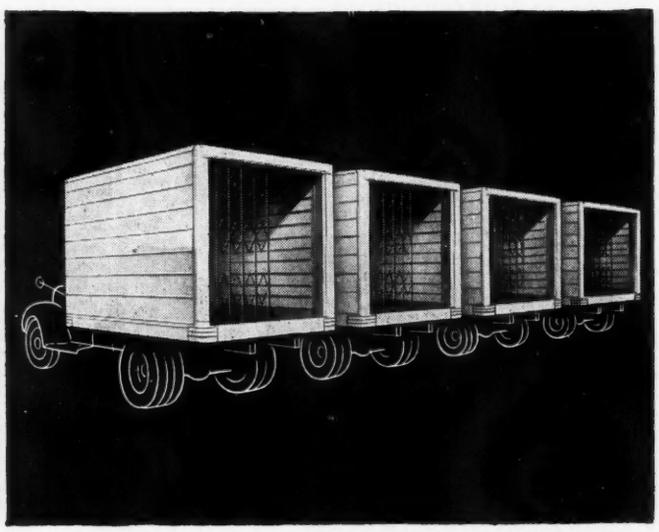




1 **EASY TO ASSEMBLE.** One or two men can easily assemble a Brown Cargo Van. Shipped in five easy-to-assemble parts. The standard parts are interchangeable—no time is lost fitting sections. No welding required. Simple riveting tools do the job.

2 **NO PAINTING NECESSARY.** The naturally lustrous aluminum finish of a Brown Aluminum Cargo Van forms an excellent background for your name or insignia. It is not necessary to protect these bodies with paint. The finish is permanent.





3 **NO RUST OR CORROSION WORRIES.** All aluminum alloy sheet in Brown Cargo Vans is protected on both sides by an integrally bonded layer of pure aluminum rolled into the tough alloy core for weather and rust resistance and strength.

4 **SMART, LASTING APPEARANCE.** Brown Cargo Vans keep their sparkling finish permanently, insuring you of a continuously smart, bright and clean looking truck or fleet. They help to merchandise your fleet — give it a uniform attractive appearance.

"CARGO VAN" SPECIFICATIONS

Size	Weight	Width (Over-all)	Height (Over-all)
12 ft.	1,000 lbs.	92 in.	86 in.
14 ft.	1,170 lbs.	92 in.	86 in.
16 ft.	1,340 lbs.	92 in.	86 in.

Brown truck bodies are sold through authorized distributors. Order from your nearest Brown distributor. Or, if there is no Brown distributor in your immediate area, have your local distributor contact Brown Industries for information. Shipped in sections in carload lots to distributors.

Brown
ALUMINUM TRAILERS
Brown Industries
Spokane 1, Washington

it's NEW!
POWER TAKE-OFF
FOR CHEVROLET
for 1948 Synchro-Mesh
Truck Transmissions

It's Silent!
It's Simple!
It's Long Lived!
Helical gear shifts
like a spur gear.
NO MOVING PARTS
when not in gear!
PHONE OR WIRE
FOR DETAILS
CHELSEA
PRODUCTS, INC.
21 Buchanan St.
CHELSEA, MICHIGAN

Safe Driving Quiz

(CONTINUED FROM PAGE 150)

We see how good the applicant is in determining front, rear and side limits; how good he is at parking.

Transition Training

IT is our practice in our plant to have drivers wishing to change from horse-and-wagon routes to vehicular routes to get a chance to practice with the type of equipment he will be driving in the future. The same is true of the man changing from one type of truck to another. If this man feels he needs some extra practice we get him a truck, take him to the training area and let him go to it.

We much prefer to give the road test to a group of applicants rather than the single individual. A group leads to competitive driving with every applicant striving to outdo the other.

After the applicant has passed all these various tests he is hired. But he still does not wheel a truck around a route because for a period ranging from two days to a week he rides around with one of our regular men getting practice on the streets of the route. When he is judged adequate he gets his own truck.

As driver supervisor it is my job to know all routes so that if a driver complains I can pretty well judge what he is up against. We also make it a point to check on the route or on the job with every driver. We pass the time of day with him and try to find out how things are going and whether everything is satisfactory.

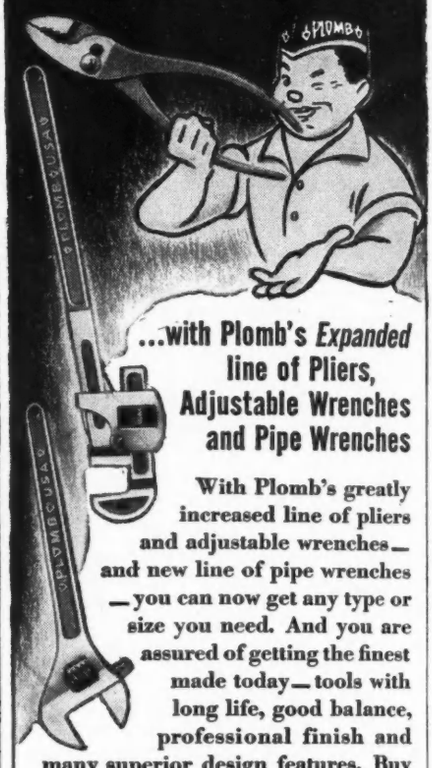
We like farmbred boys for drivers and have many of them with us especially on the over-the-road and tractor runs. The farm boy seems more responsible, more willing to accept responsibility and seems to more appreciate the fact that trucks are something that must be taken care of.

Our driver indoctrination is a one-day, one shot business. For the balance of the driver's tenure of stay with us we simply have to rely on constant talk, talk, talk and instruction to keep our drivers aware of their responsibility both to us and to themselves.

END

(Please resume your reading on P. 55)

HOLD
EVERYTHING!



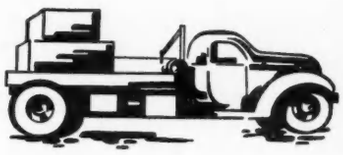
...with Plomb's *Expanded*
line of Pliers,
Adjustable Wrenches
and Pipe Wrenches

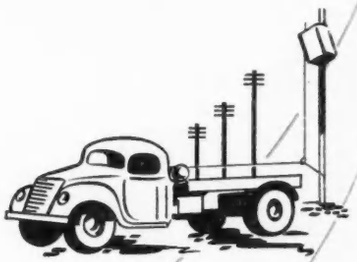
With Plomb's greatly increased line of pliers and adjustable wrenches—and new line of pipe wrenches—you can now get any type or size you need. And you are assured of getting the finest made today—tools with long life, good balance, professional finish and many superior design features. Buy them today from your Plomb Dealer. Write for catalog to

PLOMB TOOL COMPANY
2269N Santa Fe Avenue
Los Angeles 54, Calif.

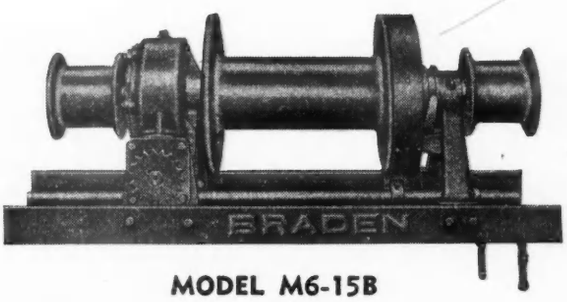
PLOMB
Prime Quality
TOOLS

SPEED UP those Handling Jobs *with* Safety!





BRADEN Truck Winches are equipped with new, improved safety features that enable the operator to do any handling job faster because he can be sure of perfect control of the winch at all times. All of BRADEN medium and heavy duty winches are equipped with the new Oil Cooled, Fully Adjustable, Automatic Safety Brake . . . the safest truck winch brake on the market.



MODEL M6-15B

Safe Working Load 12,000 lbs. For use on 1 and 1½ ton trucks. Furnished with one speed forward and one reverse power take-off, or two speeds forward, one reverse power take-off and all driving and mounting parts.

BUY BRADEN . . .
They are Safer

BRADEN WINCH COMPANY
1001 East Admiral Boulevard

BRADEN
Winches
IN SERVICE AROUND THE WORLD

TULSA 3,
Oklahoma

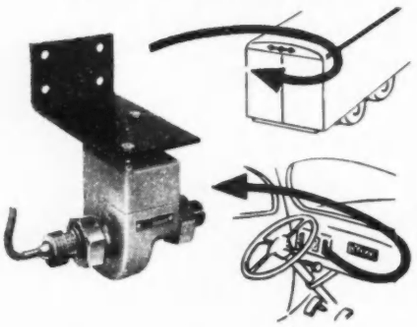
Use postage-paid card inserted at page 57 for free information on advertised products

SURE! you want to save money...

and YOU can with

the TRAFFIC EYE

a better way to CONTROL SPEEDS on YOUR TRUCKS



Too much speed can cost you money in accidents, law suits, wear and tear, and high insurance rates.

The Traffic Eye helps to solve your speed problem. More economical than a speedometer, safter than a governor, it provides a constant visual speed chec for your driver. Set for any desired grouping of speeds (25-35-45, or 30-35-40); the lights go on in rotation as each predetermined speed is reached. It is easy to install, low in maintenance cost.

Controlled Speeds Assure You

Lower Operating Costs
Fewer Accidents
Lower Insurance Rates
Increased Business
Longer Vehicle Life
Less Maintenance Cost

Fill out this coupon AB for full information:

Please send me additional information on the Traffic Eye

Name.....

Address.....

Position.....

THE CINCINNATI TIME RECORDER CO.
1733 CENTRAL AVE. CINCINNATI 14, O.

This is a COLE-HERSEE SWITCH

ITS QUALITY IS UNEQUALLED

UNIVERSAL HEADLAMP SWITCH

One of a Complete Line of ORIGINAL Rugged and Dependable Switches made for Leading Car Manufacturers

SEND FOR COMPLETE CATALOG

COLE-HERSEE CO.

Manufacturers of
HEADLAMP SWITCHES STARTER SWITCHES HEATER SWITCHES
PANEL SWITCHES TRAILER CONNECTORS PLUGS SOCKETS ACCESSORIES
FOR THE AUTOMOTIVE INDUSTRY

20 OLD COLONY AVENUE, BOSTON 27, MASS.

CCJ Newscast

(CONTINUED FROM PAGE 110)

NEW SPARK PLUG NUMBERS

The Champion Spark Plug Co. announces a change in plug symbols, renumbering most of its 14mm, ⅜-in. thread length types to correspond to the numbering system used on the 10mm, 18mm and ⅞-in. sizes.

As the J-8 plug has the largest percentage of sales and has maintained this position over the years, it will retain its number as will the J-14. The other types will be re-numbered with the hotter plug having the higher number and the colder plug having the lower number.

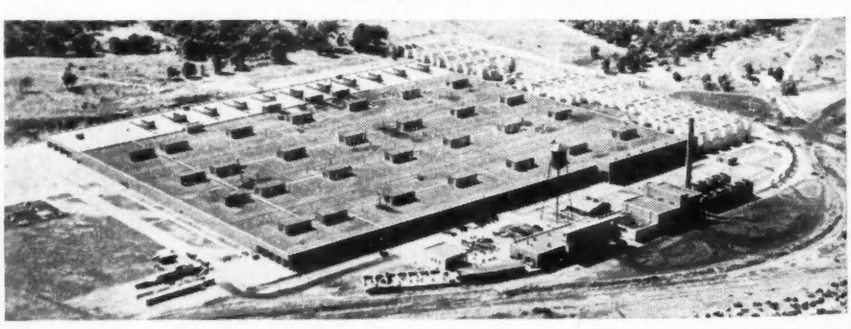
CARRIER RATES UP 30%

Walter F. Mullady, president of the Decatur Cartage Co., Chicago, declared recently that although there has been an 81.5 per cent increase in the general level of prices since 1939, motor carrier rates during the same period have gone up only 30 per cent.

Addressing the Cincinnati Traffic Club here, Mr. Mullady said wages alone increased 55.6 per cent from 1941 to 1946. Then there was an increase of 84 per cent in the per-mile cost of tires and tubes; 68 per cent increase in safety and insurance expense and 75 per cent increase in repairs to equipment.

(TURN TO PAGE 234, PLEASE)

Studebaker Segregates Truck Assembly

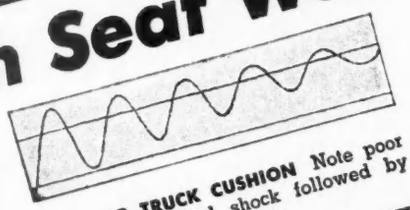


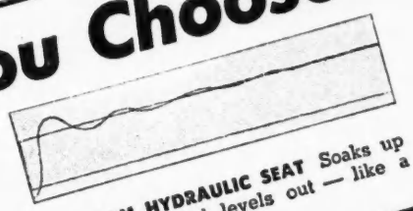
As quickly as possible, all Studebaker truck assembly operations are being moved to this 28-acre plant where Studebaker built aircraft engines during the war.

If You Drove Your Own Truck

Which Seat Would You Choose?

REGULAR TRUCK CUSHION Note poor take-up of initial shock followed by equally rough rebounds.





BOSTROM HYDRAULIC SEAT Soaks up initial shock and levels out — like a passenger car ride.

OF COURSE, as a truck driver these Ride-Graphs* would tell you to choose the Bostrom Seat because it soaks up shocks, dampens rebound. Day in, day out, your drivers take a toll of hidden fatigues, damaged kidneys and backaches from the millions of jars and jolts. A driver's sensitive internal organs and spinal column were never made for such punishment.

You pay too . . . in slower schedules, driver and truck lay-ups, greater safety hazards, which mean higher operating costs, lower profits. Obviously, if you drove your own truck for a living you would get the Bostrom Seat . . . not for comfort alone, but to get the most from yourself and your truck. And your bonus would be a seat which outlasts regular cushions, six to one.

Ask your dealer for a demonstration and the facts about the Bostrom Model 47 Hydraulic Seat. For free folder "12 Eye Openers Concerning Truck Seats" write:

Bostrom Manufacturing Company
133 West Oregon St., Milwaukee 4, Wisconsin

- Hydraulic shock absorber takes all the jolts.
- Durable steel frame.
- Fore and aft adjustment.
- All moving parts of suspension mechanism move in rubber.
- No oiling.
- No coil springs. 3" bonded rubber pad lasts a lifetime.
- Seat coverings can be replaced in 10 minutes.

*Actual ride-graph films from among thousands taken in Bostrom Seat Research. They show comparative effect of a single road shock under identical conditions.

BOSTROM

Bostrom Hydraulic Seats now standard or optional equipment on the following trucks: GMC, Diamond T, Federal, Hendrickson, Peterbuilt, Walter, Ward La France, FWD, Oshkosh, and Coleman. Be sure to specify Bostrom Model 47 Seats on your new trucks.

ANYWAY YOU LOOK AT IT....

TRADE MARK YANKEE REG. U.S. PAT. OFF.

is Outstanding!

SAFETY

High fidelity vision that eliminates tricky illusions. No distortion. Easily adjusted to suit specific "seeing needs" of all drivers.

QUALITY

Over 32 years experience...since 1915. Technical research, up-to-the-minute production methods and painstaking attention to detail. Yankee Mirrors are the finest in the world.

ECONOMY

Built-in-durability, metal parts bonderized, "know-how" in processing mirrors — all add up to keep your replacement maintenance down!

NO. 245 TELESCOPIC ADJUSTABLE MIRROR WITH 5" HEAD

- Extends from 19¼" to 27¾".
- Universal Mounting.
- Adjustable to any position.
- Heavy Steel Tubing.

NO. 238 6" MIRROR HEAD

Write for Catalog

See Your Jobber

245H—REPLACEMENT MIRROR HEAD Made to fit the No. 245 Telescopic Adjustable Mirror.

CONVERSION KITS

STOP AND TAIL LAMPS

DIRECTIONAL SIGNALS

YOU'RE SAFE WHEN YOU SEE WITH YANKEE

YANKEE METAL PRODUCTS CORP., NORWALK, CONN., U. S. A.

Western Problems

(CONTINUED FROM PAGE 64)

Mountains," Mr. Rodgers continued. "Large gross weights need horsepower and this means more horsepower output per pound of engine. Answers from a number of carriers, whom I queried to obtain data for this paper, indicate that they want about 20 mph on the five to eight per cent grades which they encounter, and 40 to 55 mph on level roads."

On the same subject, W. B. Oakley of the Detroit Diesel Engine Division mentioned some recent test work showing that about 17 per cent excess power for the same vehicle gives greatly improved performance with the same fuel economy as with the smaller engine.

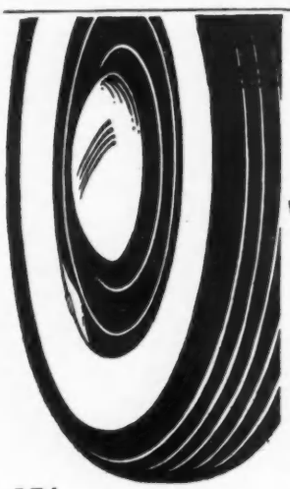
R. L. Fryer, Jr., White Motor Co., gave some figures showing the greatly increased horsepower required for moving vehicles of 70,000 and 100,000 GTW on five per cent grades at 18 to 20 mph. Calculations show that vehicles of 100,000 GTW must have engines in excess of 500 hp to negotiate grades of 8 per cent at around 20 mph. His figures also showed that more than half of the horsepower required on grades is needed to propel the vehicle at around 55 mph on the level.

END

(Please resume your reading on P. 67)

$500 FOR OREGON'S BEST DRIVER

Rudy Nelsen, Portland, Ore., Gates tire distributor, has offered $500 cash as an award to Oregon's commercial Driver of the Year for 1948. The driver to be chosen from among the 12 Drivers of the Month named by the Oregon Motor Transport Association, on the basis of heroism, courtesy, and contributions to safety.



SNUGL FAD-A-WAY
AUTOMOTIVE
WHEEL BALANCING WEIGHTS

TRUCKS • BUSES • PASS. CARS

PAT. NO. { D-119-321 D-5189 2,036,757

MID-WESTERN AUTO PARTS
(FACTORY)
824 E. ELM ST. KOKOMO, INDIANA

BRANCH: 736 S. GREEN LEAF WHITTIER, CALIF.

BRANCH: 1898 CHILI AVE. ROCHESTER, N. Y.

RELIANCE *Custom Built*
Semi TRAILERS
Tandem TRAILERS
and Four Wheel TRAILERS
Designed especially to do the heavy duty jobs
RELIANCE TRAILER MFG. CO.
907 Franklin Ave., Steubenville, Ohio
"Ask the man who pulls one"

THE MODERN "Sign Painter" For YOUR TRUCKS

MEYERCORD Truck DECALS

The old sign painter is almost nonexistent. Even in large metropolitan centers hand painting is becoming more and more difficult to find.

The highly skilled and talented artist who painted the original of White Rock's colorful trademark would hardly paint trucks one at a time. But fortunately the Meyercord Decalcomania process will reproduce this beautiful painting with absolute fidelity thousands of times—at a fraction of handpainting time and cost. It makes possible at very moderate unit cost colors and art prohibited by slow paintshop methods. Any design in any size or colors can be reproduced in Meyercord Truck Decals. They're weathertested, washable, durable and economical for a dozen trucks or a thousand. Overnight application saves truck operating time loss. Make your trucks "mobile billboards." Send for the complete story of Meyercord Truck Decals. Please address Dept.

FREE: Fleet operators, sales and advertising executives are invited to send for "Ads-on-Wheels," a full color brochure showing how and where to use Meyercord Truck Decals.

TIRES ON THIS TRUCK SHOULD BE INFLATED TO_____LBS.

Inflation data is only one of many effective Decal uses on trucks. I. C. C. data, numerals, letters, safety marking and dozens more demonstrate the versatility of Meyercord Decals on America's fleet of trucks.

THE MEYERCORD CO.

World's Largest Decalcomania Manufacturers

5323 WEST LAKE STREET • • • CHICAGO 44, ILLINOIS

New Products

(CONTINUED FROM PAGE 164)

P216. Standing Pads

A new Spiralcool backing pad for disc sanders is being produced by the Pratt Mfg. Co., Inc., of Fairmount, Ind. The new backing pad is made of layers of rubber reinforced with fabric and bonded to a slotted iron hub. The slots in the hub force air through to the back of the sanding disc, keeping it cool under most severe usage. The forced draft action through the spirals on the pad tends to keep the abrasives clean, giving them much longer life. The pads, being made of rubber, allow flexibility in working various shapes and contours without the danger of gouging the work.

Use Free Postcard for More Details.

P217. End Wrench Sets

Three basic end wrench sets, providing the most-used opening sizes, have been announced by the Plomb Tool Co., Los Angeles, Calif. Because popular sizes only were included, the sets offer maximum utility for a low investment, according to the manufacturer. They are said to be good basic sets to which a purchaser may add more sizes in the future.

Set No. 3000BA includes four open end wrenches, with openings (in inches) of ¼ and 5/16, ⅜ and 7/16, ½ and 9/16, and ⅝ and ¾. Set No. 1100BA includes four box wrenches, with 12-point box openings (in inches) of 5/16 and ⅜, 7/16 and ½, ½ and 9/16, and ⅝ and ¾. Set No. 1200BA includes six combination box and open end wrenches, with openings (in inches) of 5/16, ⅜, 7/16, ½, 9/16 and ⅝.

Use Free Postcard For More Details.

$21,000 Miller Job

The new Miller Brewing Co. Dodge delivery truck, said to cost $21,000. Specially designed by Brookes-Stevens Co. of Milwaukee, this particular design is to be carried into one, two, and three ton trucks to give Miller Brewing identity complete coverage on almost any type of vehicle they will use for the transportation of beer. Known as a WK-65 Gemmer conversion heavy duty truck, the new vehicle carries 1100 x 20 tires, has a 136 in. wheel base, is 96 in. wide and 113 in. high.

P218. Portable Shop

"The Handy-Matic," a motorized, completely equipped portable repair shop for "on-the-spot" repairs is announced by Wyzenbeek & Staff, Inc., Chicago, Ill.

A flexible shaft machine is mounted on a compact, easily transported cabinet containing 25 accessory tools, and two dozen supplies.

Power is supplied by a 1/3 hp motor, 110 or 220 volts, 60 cycle AC. The flexible shaft is the Wyco, No. 10-P, 5 ft. long. The cabinet, 32 in. high, on three caster legs, is of all-steel construction. It is equipped with shelves. Shipping weight, 100 lb.

Use Free Postcard for More Details.

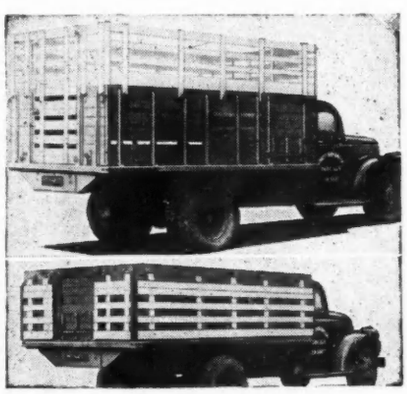
P219. Overload Spring

New product of Burton Auto Spring Corp., Chicago, is announced as Stab-O-Load—a torsion type coil spring easily installed on light trucks in order to protect against overloading.

Placed in pairs, between the rear axle and frame, they come into play immediately to carry the extra burden before springs are flexed beyond normal limits. Half ton trucks can be loaded to a full ton without strain or damage, and still maintain the cushioning properties that asssure full protection to the load and to the car, the company states.

Use Free Postcard for More Details.

Fold-Down Truck Body



A new type of fold-down truck body, which permits conversion from a stock rack to a grain body in a matter of moments by one man has been announced by Mid West Body and Mfg. Div., Paris, Ill. The new model is a fold-down truck body with full draft, controllable ventillation, made possible by means of removable filler strips and an open endgate. The top stock racks may be folded down without any heavy lifting, and one-man assembly is possible due to individual hinge point suspension of the top racks instead of the conventional long hinge rod. The new model is adaptable not only to carrying livestock but all types of grain and loose farm products. Double-decking or hoist installations may be added easily.

P220. Street Guide

A new line of business office maps providing an automatic patented means of locating streets in any city or state is offered by Hearne Brothers, Detroit, Mich. The maps are lithographed in five colors, backed with high grade map linen and mounted on spring rollers with stainless steel moldings. They are surfaced with a celluloid coating on which routes and territories may be drawn in colored crayon, and instantly wiped clean with a damp cloth. The patented automatic street finder quickly finds any street location.

In addition to its use for charting sales routes and territories, the map is said to be of unusual value in establishing truck and commercial delivery routes making it possible to plan economical coverage which marks savings in man-hours, ton-mile expense, and permitting a better utilization of valuable transportation equipment.

Use Free Postcard For More Details.

P221. Liquid Cleaner

The Magnus Chemical Co., Inc., of Garwood, N. J., is offering two new liquid cleaning materials to users of steam gun and vapor cleaning equipment.

These two new materials are liquids and will not clog valves of the machine as oftentimes happens with slow dissolving paste or powdered products.

Magnus liquid vapor cleaner is instantly soluble in cold water. It can be stored for long periods without deteriorating. It can be dispensed and measured out easier from the drum by simply opening the faucet.

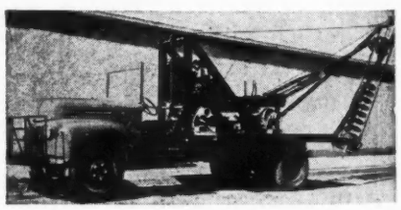
Both 92-K (light duty cleaning) and 94-K (heavy duty cleaning) compounds are clear, colorless, viscous concentrated alkaline cleaners. As they are odorless and fumeless, they may be used indoors without disagreeable effect upon the person doing the cleaning.

Use Free Postcard for More Details.

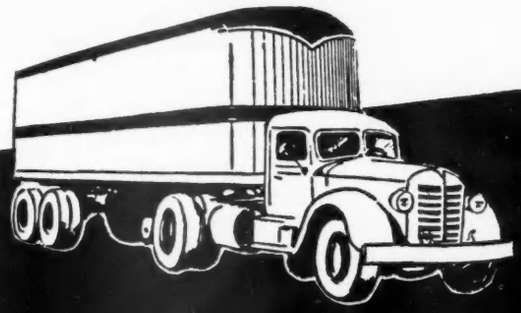
END

(Please resume your reading on P. 60)

Power Posthole Digger



This power posthole digger, mounted on a 1947 model Ford 1½-ton truck, can dig a hole for an electric power pole in 25 sec., according to officials of the Cater Electric Co. of Ogallala, Neb., builders and operators of the rig. Power is furnished by a 100-hp Ford V-8 engine and is transmitted by means of a propeller shaft attached to one-half of a truck rear axle through the differential case. The unit ois one of two used by Cater in erecting Rural Electrification Authority power lines in western Nebraska.



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Standard

AXLES

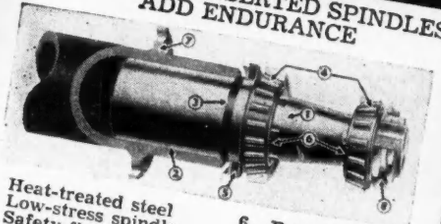
IN ANY WEIGHT CAPACITY

Standard's rugged axles are easily available throughout the country in weight capacities for all types of heavy-duty trailer construction or replacement.

From logging pole-trailers to the heaviest van-types. Expert attention given to axles of special engineering requirements.

Free Engineering Consulting Service

STANDARD INSERTED SPINDLES ADD ENDURANCE



1. Heat-treated steel
2. Low-stress spindle
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4. Heavy-duty bearings
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6. Precision-ground sections
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It's Always

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MULTI-GRIP

TIRE CHAINS

for

BETTER TRACTION

LONGER WEAR

EXTRA SAFETY

See your AUTOMOTIVE DEALER or WRITE DIRECT

The McKAY Co.

465 McKAY BUILDING

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THE EIS AUTOMOTIVE CORP

Just Out!

A snappy two-color merchandiser that gives you 18 3-oz. cans (individual refills) of Eis Super "40" Brake Fluid — famous as "The pioneer of better brake fluids".

Pull in those good EXTRA DOLLARS!

THE dollars you pull in, outside of your regular service and repair work, help to boost the year's profits. There are plenty of these good *extra* dollars in the redesigned and improved merchandiser for Eis Individual Brake Fluid Refills.

The sound advice printed on this carefully designed "silent salesman," if followed properly, will get you your share of this business.

Ask your jobber to show you this and other profit-building merchandisers specially planned for YOU.

THE EIS AUTOMOTIVE CORPORATION
MIDDLETOWN, CONN.

BRAKE PARTS
BRAKE CABLES
BRAKE TOOLS
BRAKE FLUID
EIS

CCJ Newscast

(CONTINUED FROM PAGE 174)

NEW TRUCK RECORDS IN '47

The trucking industry established all-time records during 1947 for the volume of freight handled and the number of vehicles in use, according to figures released by ATA. Loadings of revenue freight topped even the peak war year of 1943, and were double the average volume handled by for-hire carriers in the three-year base period of 1938-1940 used by ATA for its truckloading index. They were 11.5 per cent above the monthly average for 1946 and 9.1 per cent above that for 1943.

Total truck registrations at the year's end were estimated at 6,492,000 units, a 20 per cent increase over the 1946 total of 5,423,000.

DU PONT TETRAETHYL LEAD

E. I. du Pont de Nemours & Co. began marketing tetraethyl lead anti-knock compounds direct to refiners for the first time on Jan. 1. However, the company has been making tetraethyl lead for 24 years and has been responsible for much of the development of equipment and manufacturing processes.

At the same time, district sales offices and laboratories are being opened throughout the country, along with two new general laboratories—a road-test laboratory at El Monte, Calif., and an engineering laboratory at Deepwater Point, N. J.

P.I.E. MIDGET ON TOUR

Pacific Intermountain Express is taking its quarter-scale model tractor and semi-trailer (CCJ, Aug., '47, pg. 61) on a nation-wide tour which will extend into New England and as far south as Jacksonville, Fla. The tour, which got underway Jan. 2 at San Francisco, will take 12 months. C. E. Johnson, vice president and general manager of P. I. E., is in charge.

DAY'S WORK FOR DAY'S PAY

In a New Year's letter to 7600 members, Edward Fenner, Executive Director of the Chicago Truck Drivers, Chauffeurs and Helpers Union, Local 705 Independent, urged his members "to do everything possible to help maintain and strengthen the trucking industry in Chicago and the Middle West." In return for that, Fenner said, his members can expect "to benefit financially, through higher wage scales and steadier jobs for drivers."

"The answer is not just more demands for higher rates," Fenner said. "Every member of this union must resolve to give his company a day's work for a day's pay, and live up to the letter and spirit of every union contract. Only in that way can trucking companies withstand the competition of other freight carriers, and afford to pay higher wages."

(TURN TO PAGE 236, PLEASE)

Trucks carry more profit-pounds, less deadweight, with Reynolds Aluminum Bodies

THE fact that aluminum weighs only ⅓ as much as steel is the first big advantage... one you can't get around. But there are more reasons why enterprising truck operators are increasing profits and cutting operating costs with Reynolds Aluminum Truck Bodies.

These bodies are assembled from standard parts, to your choice of many designs. A distributor near you can do the job promptly, so you won't have a chassis investment standing idle.

These same parts are interchangeable. A section can be quickly replaced, so that "time out" for repairs is cut to a minimum.

There are savings in maintenance, too. Rust-proof aluminum needs no painting, weathers attractively, cleans easily.

And the weight saving goes much farther than increased payload. You'll find it reflected in a long-range lowering of fuel and tire costs, engine and chassis repair expense.

Write for name of nearest distributor.

Reynolds Metals Company, Truck and Trailer Division, 2000 South 9th St., Louisville 1, Kentucky.

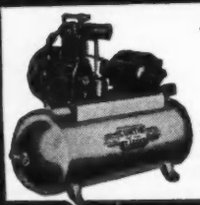
"THE LIGHTWEIGHT CHAMPIONS OF THE ROAD"

IF YOU SEE RUST YOU KNOW IT'S NOT ALUMINUM

REYNOLDS METALS

REYNOLDS ALUMINUM TRUCK BODIES

OVER 70% OF ALL MAKES OF TRUCKS AND BUSES ARE Zollner EQUIPPED
ZOLLNER
HEAVY DUTY PISTONS
ZOLLNER MACHINE WORKS FORT WAYNE IND

Is it Air YOU WANT?

—then write for
BULLETIN C-6
Illustrating and describing
CURTIS AIR COMPRESSORS • AUTO LIFTS • CAR WASHERS
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of Curtis Manufacturing Company
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OVERSIZE AND STANDARD
REAR WHEEL STUDS
for all Trucks
ORDER FROM YOUR JOBBER
CHAMP-ITEMS
CHAMP-ITEMS, Inc.
6191 Maple Ave.
St. Louis 14, Mo.

SEND FOR CATALOG

CCJ Newscast

(CONTINUED FROM PAGE 234)

TRUCK ACCIDENTS RISE

The winter-time rise in accidents got off to a flying start in October. The number of accidents per 100,000 miles of operation rose from 1.97 in September to 2.06 in October, according to ATA statistics. Eighty-seven carriers operating a total of 26,772,146 miles reported their vehicular accident experience.

Rural accidents continue to account for a high percentage of the truck accidents reported to ATA. In October, 30.4 per cent of the accidents occurred in areas classified as rural by reporting carriers.

Straight and level roadways with no intersections, always the leading scene of rural accidents, have given the rural accident curve a sharp upward twist. These mishaps accounted for almost 54 per cent of rural accidents in October, compared with 42 per cent in September.

Part of the increase is due to a sharp rise in head-on collisions, which increased five-fold in October. Because of the severity of this type of accidents, this increase shows a serious situation from the standpoint of the property damage and personnel injury which undoubtedly resulted.

Another class of non-intersection accident that increased substantially was "sideswipes while overtaking" another vehicle. Such accidents are almost 100 per cent preventable by the exercise of the driver's good judgment.

Left turns are causing trouble again. Failure to slow down and keep the unit under control was undoubtedly the major factor in these accidents. There has been a slow but steady increase in the number of accidents involving livestock. Any driver who operates in rural areas should be aware of the potential hazard of livestock along the road.

Backing accidents in October accounted for 35.2 per cent of the urban accidents reported to ATA. As usual, most of the collisions were with stationary objects, but collisions with other vehicles ran a close second.

Collisions with stationary objects accounted for 28 per cent of urban accidents in October. Most of these collisions occurred while backing.

The companies listed below operated

(TURN TO PAGE 238, PLEASE)

SNAP-ON TOOLS CORPORATION
8026-C 28th AVE. KENOSHA, WIS.

Available Trucks
1½ TO 20 TONS
TRUCKS • TRACTORS
TRAILERS • BUSES
(SINCE 1910)
TELEPHONE—BRUNSWICK 1100
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2501 ELSTON AVE.—CHICAGO 47, ILL.

PREFERRED FOR REPLACEMENT
SKF
BEARINGS

SPINNING POWER
-a Companion Product of Full-Spark Plugs
GLOBE-UNION INC.
MILWAUKEE 1, WIS.

Gatke
CUSTOM-BILT
BRAKE LININGS
BLOCKS SETS ROLLS SHEETS
GATKE CORPORATION
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CEMCO
Breaks BIG News
in the big April issue
WATCH FOR IT

GRAMM PAYLINER

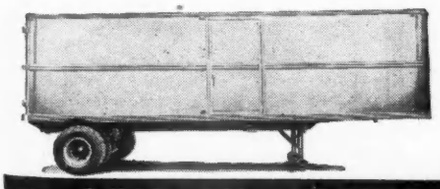
RUGGED LIGHT WEIGHT ALUMINUM VAN

Peak payloads with safety—low operating cost—that's the story of what the GRAMM ***PAYLINER*** offers you! This unique van provides the advantages of both a light weight, sturdy body combined with the stamina of the rugged steel GRAMM underconstruction. Low center of gravity and lighter weight assures easy pulling, better control, safe and low cost operation. The remarkable success of hundreds of ***PAYLINERS*** in daily service in all parts of the country offers real proof of sound engineering, quality construction, long and economical service. For neat, modern appearance . . . for easy handling . . . . for efficiency . . . . for dependability and economy . . . . for more profitable operation—it's the ***PAYLINER.***

As a "profit-wise" operator, you'll want all the facts about the ***PAYLINER*** before you buy your new equipment. Contact your GRAMM dealer or distributor, or write for literature and complete information.

GRAMM

A NAME FAMOUS FOR HIGHEST QUALITY IN TRANSPORT EQUIPMENT



GRAMM TRAILER CORP.

Delphos, Ohio

SOLD BY LEADING INDEPENDENT DISTRIBUTORS AND DEALERS

CRACKED BLOCKS?

SAVE cracked BLOCKS and HEADS with ZO-TITE Blocksaver. Either in or out of chassis.

This new metallic powder treatment repairs cracks with a HARD, METALLIC, CHEMICAL-WELD. Once set, will last forever. Functions safely with anti-freeze. (Will not work on radiators) Test it on a tough job. Write for free sample on your letterhead.

Sold by jobbers.

THE ZO-TITE PRODUCTS CO.
Dept. CC, Ozone Park 16, N. Y.

HEAVY DUTY MOTOR TRUCKS
AND
GASOLINE ELECTRIC GENERATING SETS
DUPLEX TRUCK COMPANY
Lansing, Michigan

DESIGN LATEST **QUALITY** UNQUESTIONED
SEE YOUR LOCAL JOBBER

KEN-TOOL MFG. CO. AKRON, O.
LARGEST EXCLUSIVE MFGR'S OF SPECIALIZED WHEEL AND TIRE CHANGING TOOLS KNOWN AND USED AROUND THE WORLD

JOYCE LIFTS & JACKS

Single and 2-Post Lifts for all types cars, trucks and buses. New ultra-modern design; simplified installation; level, clear floors; air or electric power. Also Liftmaster Hydraulic Jacks—forged steel construction. *Ask for Bulletins.*

THE JOYCE-CRIDLAND CO., DAYTON 3, OHIO

SAFE

SPEAKER TUBE AND TIRE REPAIRS

One Reliable Source for all your needs
Electromatic Vulcanizer • Match Patch Vulcanizer • Match Patches • Electro-Patches • Rubber Rivets • Replacement Valves • Electro-Timer • Casing Patches • Convertible Tire Valves • Valves and Caps • Motorists' Kits • Solvents • Beveled Patches.

J. W. SPEAKER CORP. • Milwaukee 12, Wis.

CCJ Newscast

(CONTINUED FROM PAGE 236)

100,000 miles or more without a reportable accident during October, 1947. Companies operating under 100,000 miles a month have not been included.

Company	Mileage
Mistletoe Express Service	347,500
Pierce Auto Freight Lines, Inc.	276,180
Kaw Transport Co.	207,795
Heldt Brothers, Trucks	190,161
Merrill Transport Co.	145,926
Alexander Motor Co.	122,600

"EMERGENCY" TAXES AT NEW HIGH

Emergency Federal taxes paid by highway users reached an all time high of $1,056,469,193 in 1947, the National Highway Users Conference has reported. The taxes in question, which were born in the depression and war, are levied on new automobiles, trucks, trailers, motorcycles, tires, parts, gas, oil and other items.

The tax on new cars and motorcycles alone, which is levied at 7 per cent of the factory value of both, yielded $244,340,335 last year, an increase of 118 per cent over 1946.

In its tabulation of receipts from the Federal automotive excise taxes, the Conference gave totals for only the highway users' portion of the tax total. Actually, receipts from these taxes reached $1,159,153,603, counting in payments for non-highway use.

The 1½ cent Federal gas tax, which is levied on top of state and some local gasoline taxes, yielded $403,920,000 from highway users in 1947, an increase of 10 per cent over the previous year.

The highway users' share of the tax on oil was $36,410,000, a 7 per cent increase.

Their payments on trucks totalled $75,150,695, a 76 per cent increase.

Their tax cost on tires and tubes was $170,720,729, a 7 per cent increase.

On parts and accessories, the percentage of increase soared to 44.13 per cent, for a total dollar payment of $116,909,583.

In addition, a tax on transportation of oil by pipeline yielded more than $9,000,000.

(TURN TO PAGE 240, PLEASE)

ELSTON ELECTRIC SANDERS
FOR TRUCKS - BUSES - RAILS
★
HIGHWAY SAFETY APPLIANCES, INC.
1381 Marshall Ave, St. Paul, Minn.

for SAFETY
REFLECTORS • LAMPS • FLARES
GROTE
GROTE Manufacturing Company, Inc. Bellevue, Ky.
Automotive Sales Office: Moorestown, N. J.

U.S. Pat. No. 2,093,547 — Canadian Pat. No. 223,568
INTERNATIONAL CHAIN & MFG. COMPANY
YORK, PENNSYLVANIA

Transport Cooler
is the modern Mechanical Refrigeration for transportation of Frozen Food - Meat - Produce and other perishables by Truck and Trailer.
Write, wire or phone for information
TRANSPORT COOLER, INC.
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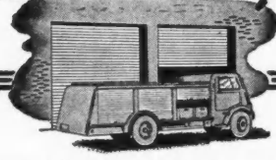
• TRUCK COILS •
by
Mallory
Universal installation features—more energy, easier starting, water-proof and age-proof.
6 Volt . . . $10.00 12 Volt . . . $12.50
Condensers $2.00
MALLORY ELECTRIC CORP.
DETROIT 4, MICH.

KINNEAR *Rolling Doors*



On truck bodies *or* buildings, Kinnear Doors are efficient, dependable, economical. Steel-slat curtain coils upward, out of way. Any size; motor operation if desired. Write for details.
THE Kinnear Manufacturing Company
2100-20 Fields Avenue, Columbus 16, Ohio

Part of a Belden Wired Fleet of Railway Express Agency, Inc.

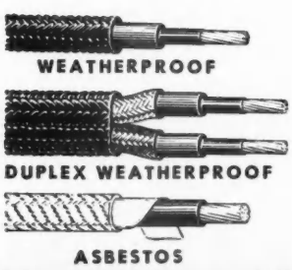
RAILWAY EXPRESS AGENCY, INC.

—another Big User of Belden Wire

for More Miles of Service

Standard Belden primary wires sizes 12 to 16 are available in 6 colors—and size 10 in 2 colors. Special asbestos covered and weatherproof types are also provided. For complete wire service on trucks and buses, specify Belden.

FOR SPECIAL SERVICE



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DUPLEX WEATHERPROOF

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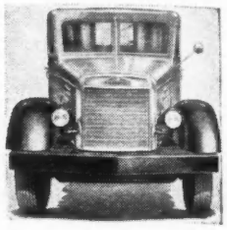
Belden *Automotive* **WIRE**

BATTERY CABLES · · · LIGHTING WIRES · · · SPARK PLUG WIRES

A Live-Wire Truck Agent Can Add
$10,000
to his 1948 income with the
BIEDERMAN TRUCK DEALERSHIP

Literature on request
Wire now for exclusive sales contract!

BIEDERMAN MOTORS CORP.
Cincinnati 14, Ohio



• *Engineered*
EASY FITTING • • LONGER LASTING
• *Identified*
CLEARLY – FOR QUICKER SELECTION
Wohlert CORPORATION
LANSING 5, MICHIGAN

SUPER-POWER
Center-Lift
HERCULES
Hydraulic Hoists and Dump Bodies
HERCULES STEEL PRODUCTS CORP.
GALION, OHIO

For Every
METAL CLEANING
Requirement
★ Degreasing Machines & Safety Solvents
★ Metal Parts Washers
★ Alkali & Emulsion Cleaners
★ Strippers & Spray Booth Compounds
DETREX Corp.
DETROIT 32, MICHIGAN

BETTER than Ever Before
Repower with
RAMCO 10 up
PISTON RINGS

CCJ Newscast

(CONTINUED FROM PAGE 238)

ULTIPARA RUBBER FOR TIRES

A new synthetic rubber, "ultipara," said to excel the best natural rubber by as much as 20 per cent, may soon end United States dependence upon foreign sources for its vital rubber stock pile.

Tires made with ultipara will soon be available in limited quantities to the public, the executive committee of the Copolymer Corp., Baton Rouge, La., has reported. The Copolymer Corp. is a privately-owned, Government sponsored producing, research and development group comprised of eight independent rubber manufacturers.

Actual production of the new "wonder" synthetic rubber, reported to cost no more to produce than the conventional type of synthetic rubber, climaxes a $15,000,000 Government research program. The production method, which differs radically from accepted formulas, is controlled by the United States Government and is expected to be made available to all rubber manufacturing companies in this country.

According to the committee statement, ultipara is a better rubber and can be used alone or mixed with natural or other synthetic rubbers in various proportions. It will probably produce a significant change in the world rubber position. The price of natural rubber is 20½ cents per pound. Ultipara can be produced at about the same price as ordinary synthetic rubber, which is now sold at 18½ cents per pound.

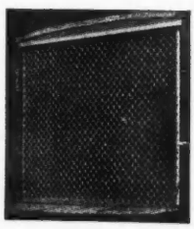
Either petroleum or grain can be used as a base. The rubber development of ultipara will probably influence the Government to change its requirements for use of natural rubber in tire production. Currently approximately 60 per cent of the rubber used in passenger cars is synthetic and 40 per cent is natural. No natural rubber is needed with ultipara for tire treads.

NEW BRAKE FOR LITTLE TRUCKS

Bendix Corp., South Bend, Ind., is about ready to introduce a new product specifically designed to furnish a more suitable brake power for light trucks. Announcements will be made within 30 days. L. A.

(TURN TO PAGE 242, PLEASE)

ZEHR
COLLAPSIBLE TRUCK BACKS



Safe . . . easy and simple to handle. Zehr Truck Backs are all-welded steel designed for great strength and long continuous service.
They are theft-proof, rust-proof and flexible.
Write for details and prices.

ZEHR PRODUCTS COMPANY
2130 East Hazzard Street, Philadelphia 25, Pa.

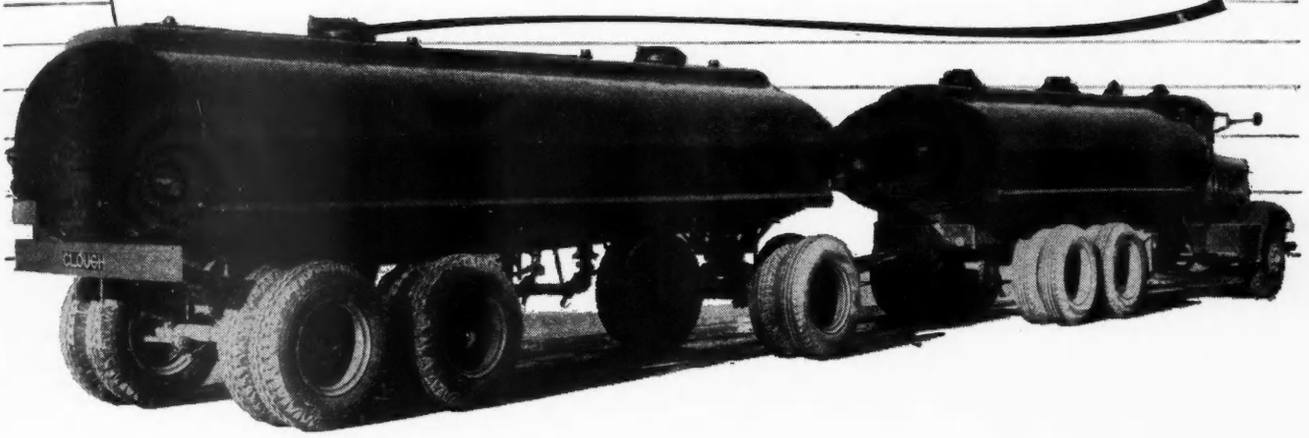
DECALS
for FLEET MARKING
Costs less than hand lettering. Does not tie up equipment.
Quantities — 50 pieces or more any size.
Can reproduce any art work.
Prompt Delivery
EXCELLO SPECIALTY CO.
4101 East 100 St. Cleveland 5, Ohio

BUY DIRECT AND SAVE
•
OIL FILTER ELEMENTS
for all Buses and Trucks
We have Users in your City
Ask us Who—
And get our prices.
REFILL FILTER CO.
120 Rhode Island Ave., East Orange, N. J.

WATCH WHITAKER ADVERTISING IN 1948
WHITAKER CABLE CORPORATION
KANSAS CITY, MO. ST. JOSEPH, MO.
PHILADELPHIA LOS ANGELES

IF YOU WANT TO CUT COSTS...CUT WEIGHT!

257 Gallons ride free in these COR-TEN-built units



To get maximum capacity in your transportation units, get rid of needless weight. In these units, U·S·S Cor-Ten lightweight construction trims 765 lb. off the truck tank, 906 lb. off the trailer tank—saves a total of 1671 lb. in all. And every 6.5 lb. weight saved adds one gallon to the load that can be carried.

In other words, 257 extra gallons can be hauled at no extra cost—a saving of more than $1.25 in hauling cost on every trip. In a year's operation it adds up to important money. And that's without counting in the savings in fuel, tires and brakes that the 1671 lb. less-weight-to-haul accounts for on empty runs.

Why handicap your equipment by weight that does no work? Get rid of it. Translate it into added hauling capacity by building light—and strong—with U·S·S Cor-Ten. There's nothing experimental about this pioneer low alloy, high strength steel. It's been used for the past 12 years by leading builders of commercial vehicles of all kinds, not only because it saves weight at little cost, but because its use insures unusual ruggedness and stamina as well as superior resistance to atmospheric corrosion. Ask our engineers to show you how little it costs to apply it to your designs.

Beat the steel shortage —use steel that DOES more!

By replacing carbon steel with U·S·S Cor-Ten or U·S·S Man-Ten where economically applicable, you can:—(1) Make your steel supply go one-third farther, NOW. (2) Satisfy more customers, NOW. (3) Make better products—lighter, longer-lasting and generally more profitable to the user, NOW. (4) Get these benefits at little or no greater cost per unit than NOW.

To help you adapt these steels to your product, *immediately*—and with least change in shop methods—we have a special staff of metallurgists and engineers thoroughly familiar with what these steels can do. Phone, wire or write our nearest office.

U·S·S HIGH STRENGTH STEELS

U·S·S COR-TEN · U·S·S MAN-TEN · U·S·S ABRASION-RESISTING · U·S·S MANGANESE-NICKEL-COPPER

USS HIGH STRENGTH STEEL UNITED STATES STEEL

8-363

UNITED STATES STEEL AMERICAN STEEL & WIRE COMPANY, Cleveland, Chicago & New York
CARNEGIE-ILLINOIS STEEL CORPORATION, Pittsburgh & Chicago · COLUMBIA STEEL COMPANY, San Francisco
NATIONAL TUBE COMPANY, Pittsburgh · TENNESSEE COAL, IRON & RAILROAD COMPANY, Birmingham
UNITED STATES STEEL SUPPLY COMPANY, Warehouse Distributors—Coast to coast · UNITED STATES STEEL EXPORT COMPANY, New York

STOP AND LOCK

SAVE TIME AND EQUIPMENT BY USING A

HYDRAULOCK

It's a stubborn little unit which won't allow a vehicle to move until the driver is ready. The HydrauLock provides positive all wheel lock up on any grade, in any position. Pull out the dash control - Step on the brake pedal. YOUR BRAKES ARE LOCKED! A dependable safety feature.

Write today for information

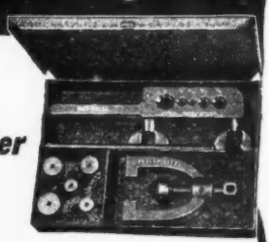
POSITIVE LOCK-UP OF HYDRAULIC BRAKES

monroe standard, inc.

GALION OHIO

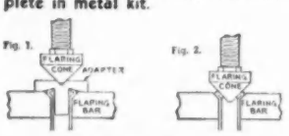
IMPERIAL
Double-Flaring Tool

. . . for steel and other metal tubing



● Ideal for brake, gas and oil line work. Overcomes tendency of welded steel tubing to crack when flared with ordinary flaring tool. First, tubing is belled, Fig. 1. Then flared in conventional manner, Fig. 2.

No. 93-FB Double-Flaring Tool complete in metal kit.



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THE IMPERIAL BRASS MFG. CO.
1209 W. Harrison St., Chicago 7, Ill.

HARD FACED VALVES

Your used valves rebuilt for better performance and economy.

LONGER SERVICE

UNPROTECTED VALVES

Prompt, Personalized Service

EXHAUST • INTAKE • SODIUM-COOLED
GASOLINE • DIESEL

CLEVELAND HARD FACING, INCORPORATED
2177 W. 28th St., Dept. A., Cleveland 13, Ohio.

Please send information and price list.

STREET .....

NAME .....

CITY ..... STATE.....

CCJ Newscast

(CONTINUED FROM PAGE 240)

Santry, service sales product manager of the Vacuum Power Devices Section, has announced.

In a discussion of the need for this device Mr. Santry said that most light trucks of the one-ton payload class require more pedal pressure to stop in a given distance than heavy freight-hauling types of vehicles. This is true, he said, because light trucks are usually not equipped with power braking—in spite of the fact that the light trucks operate mostly in city traffic with numerous stops on delivery and pick-up service.

SYNTHETIC GAS ON WAY

The production of synthetic gasoline is vital to the continuance of the present national economy in view of the vast increase in consumption of petroleum products, Howard Dimmig, vice president of Hydrocarbon Research of New York, told The American Society of Mechanical Engineers, Metropolitan Section, in a recent address.

Two large plants for production of synthetic gasoline each with a capacity of 7500 barrels per day, are already in process of construction and should be in operation early in 1949. In these plants natural gas is decomposed into a mixture of carbon monoxide and hydrogen and the gas mixture is then reacted over a suitable catalyst to produce a mixturue of 85-90 per cent gasoline and 10-15 per cent diesel oil.

"The gasoline is of superior quality—

(TURN TO PAGE 244, PLEASE)

Permalux
FINER DECALCOMANIA

FIRST IN { APPEARANCE / ECONOMY / DURABILITY

Made With DuPont "DULUX"

Write Today for details

THE PERMALUX COMPANY
500 Rathbone Ave. • Aurora, Ill.

Pre-Insulated STEEL BUILDINGS

Prompt delivery complete in one package 24' and 40' clear span or any multiple. Any length, multiples of 8'.

GARAGES • WAREHOUSES

THE PIONEER COMPANY
Century Building • Pittsburgh 22, Pa.

It's rumored that...

more than 1,500 fleets are now using Perfect Circle's Fleet Survey Plan!

Right, and with its help they've been able to cut operating and maintenance costs. For information on how the Fleet Survey Plan can help *you*, see your P.C. representative or write: Perfect Circle Corporation, Hagerstown, Ind., or The Perfect Circle Company, Ltd., Toronto, Ont.

TEC
TRUCK ENGINEERING CORP.

TRAILERS

TEC trailers carry maximum payload with minimum dead weight. Single and double axle types, all sizes and models.

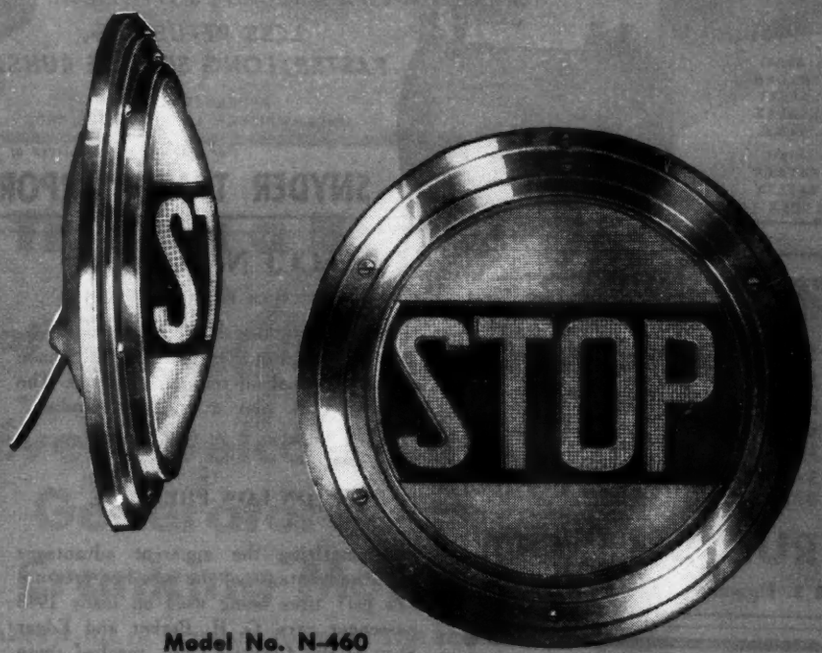
TRUCK ENGINEERING CORPORATION
Cleveland 2, Ohio, U.S.A.

AUTOPULSE
ELECTRIC FUEL PUMP

- Used in any car or truck
- No vapor lock
- Instant starting
- No stalling in traffic
- Greater fuel economy
- Added protection

AUTOPULSE CORP., LUDINGTON, MICH.

got your rear protected?



Model No. N-460

use

ARROW STOP LIGHTS

When danger ahead makes you slam on your brakes, what about the danger behind? Rely on dependable Arrow Stop Lights to protect you and your cargo from the dangers you can't see. Arrow Stop Lights are big. They're bright. They spell the word S-T-O-P so even the most careless driver won't misunderstand it.

Arrow Stop Light No. N-460, illustrated above, is mounted flush with the body. The 6⅝" lens comes in either red or amber. Hinged rim for easy access to the bulb. Choice of baked-on black enamel or chromium finish.

Front to rear, Arrow lighting equipment is the best lighting for modern safety requirements. Arrow stop lights, headlights, marker lights, directional signals, reflectors and flares are well engineered, ruggedly built, designed to stand up under years of hard use. Let Arrow be your guide to greater *safety after dark*.

Model No. N-450
Red or amber lens. Baked-on black enamel finish. Hinged rim. Bracket suspends light under rear of vehicle.

Model No. 42
Flush mounting. Baked - on black or satin aluminum finish. Fluted red or amber lens.

SAFETY AFTER DARK

ARROW SAFETY DEVICE COMPANY

MOUNT HOLLY, NEW JERSEY

ARROW

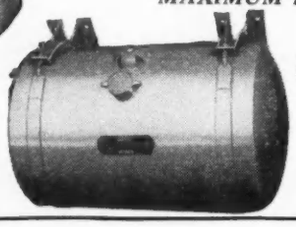
SNYDER SAFETY TANKS

(Patents No. 2181772, 2273737, Others Pending)

MAKE TRUCK AND TRACTOR OPERATION SAFE & PROFITABLE

MAXIMUM FIRE HAZARD PROTECTION.

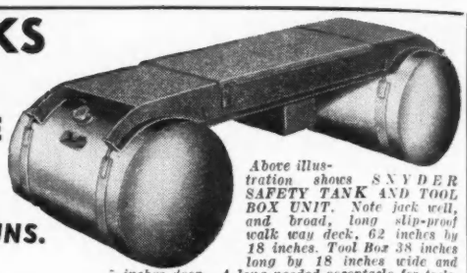
LESS REFUELING, FASTER, LONG SERVICE RUNS.



(Above) SNYDER SAFETY SADDLE TANK

(Right) SNYDER SAFETY CYLINDER TANK

APPROVED BY THE UNDERWRITERS' LABORATORIES, INC.



Above illustration shows SNYDER SAFETY TANK AND TOOL BOX UNIT. Note jack well, and broad, long slip-proof walk way deck, 62 inches by 18 inches. Tool Box 38 inches long by 18 inches wide and 5 inches deep. A long-needed receptacle for tools, chains, power jack, danger flags, etc. Contents always handy—safe and dry.

For Catalog and Address of Your Nearest Distributor, Write:

SNYDER TANK CORPORATION P. O. Box 2390, Birmingham, Ala. P. O. Box 14, Buffalo 5, N. Y.

TRUK-STEP

- STURDY — DEPENDABLE
- SELF-PROTECTING
- IN TRAVEL POSITION EXTENDS ONLY 7 INCHES BELOW BED OF TRUCK
- SAVE TIME • PROTECT DRIVERS FROM INJURY

TRUK-STEP CO.

928 S. Flower • Los Angeles, Calif.

TELL YOUR STORY DAY AND NIGHT

With Quixign's Lettering Method

- Beautiful . . . Clean Cut
- Permanent . . . Promote Safety
- Eliminates truck tie-ups
- Saves money

Wherever your trucks roll they'll attract and sell.

Write today for full particulars.

ASHLEY QUIXIGN COMPANY

15330 Idaho Ave. Detroit 3, Mich.

CLIX ENGINE PROTECTION

Pressure Clix

- Signal device for lost oil pressure—lost air pressure in braking system on gasoline and Diesel engines.

Thermo Clix

- Instant alarming device when temperature of the engine reaches the danger point.

Write for descriptive folder today!

THE NASON CO.

7663 Epworth Blvd. Detroit 4, Mich.

THE COMPLETE LINE that Completely Satisfies

Since 1906

The Fitzgerald Mfg. Co.

Torrington, Connecticut

Fitzgerald

GASKETS

CCJ Newscast

(CONTINUED FROM PAGE 242)

in fact better than the present market demands and better than that presently made by conventional oil refining processes. The diesel oil is also a superior product," Dimmig said.

REPORT ON LOW-PRESSURE TIRES

Summarizing the apparent advantages and disadvantages of the new low pressure (24 psi) tires being used on many 1948 passenger cars, G. H. Parker and Edgar Shay of the Chrysler Corp. reached these conclusions at the recent SAE Annual Meeting:

Advantages

1. Increased cushioning for better ride
2. Reduced body shake
3. Improved cornering—especially on rough roads
4. Lower rolling resistance and slightly better fuel economy
5. Improved flotation
6. Less road noise
7. Longer normal life
8. Improved life of many other car components

Disadvantages

1. Increased steering and parking effort
2. Increased cornering squeal
3. Blanketing of brakes
4. Small decrease in performance
5. Increase in tire and wheel weight

"A comparison of the above columns" said the authors "presents a rather overpowering argument against continued use of the old—and for use of the new."

(TURN TO PAGE 246, PLEASE)

FOR PROMPT COMPLETE SERVICE ON AUTOMOTIVE PARTS...

Your NAPA Jobber is a Good Man to Know!

NATIONAL AUTOMOTIVE PARTS ASSOCIATION

Detroit 1, Michigan

NAPA Assurance of Quality

TELS

New Scientific

COOLING SYSTEM TEST INSTRUMENT

Helps Prevent Trouble Caused by Overheating

write

JAMES INDUSTRIES, INC.

SKANEATELES, N. Y.

DUNK 'EM IN GUNK H-S

CURRAN CORP. LAWRENCE, MASS.

FOR LONG LIFE and Low Cost Mileage

RE-RING WITH H PISTON RING Sets

The WEL-EVER Line

UNITS AVAILABLE

GRICO

2-AXLE DRIVE

19842 W. Eight Mile Rd.

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There's a Brush that's *Right* for Every Delco-Remy Generator and Cranking Motor

It takes a lot of brushes to meet the requirements of all types of vehicles, operating under all conditions. These brushes vary in size, shape, chemical composition and physical characteristics. Each is designed to provide maximum performance and long life for a given application, taking into account such factors as commutator design, commutator speeds, current flow and other variables. When the wrong brush is used, unsatisfactory performance and damage to the unit will result. Make sure the brushes you use for replacement in a Delco-Remy generator or cranking motor are the ones specified by Delco-Remy for the unit.

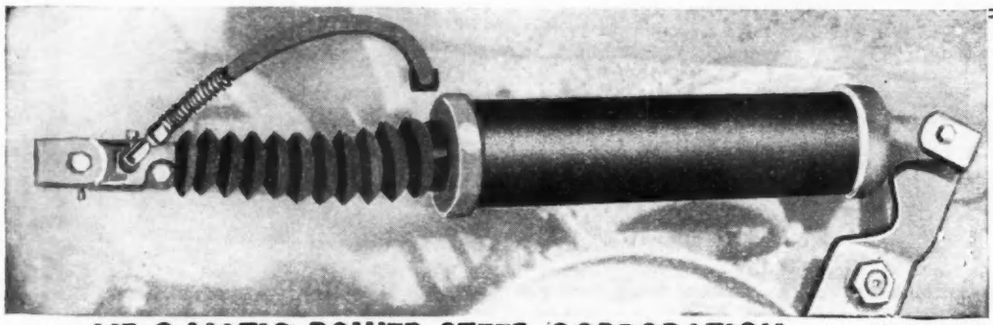
Delco-Remy

DIVISION, GENERAL MOTORS CORPORATION
ANDERSON, INDIANA

UNITED SERVICE MOTORS

DELCO-REMY—A UNITED MOTORS LINE
Available Everywhere Through
UNITED MOTORS DISTRIBUTORS

WHEREVER WHEELS TURN OR PROPELLERS SPIN



AIR-O-MATIC POWER STEER CORPORATION
2180 Lee Road · · · · Cleveland 18, Ohio

Easier and Safer TRUCK MANEUVERABILITY

A self-contained unit of extremely simple construction, yet exceptionally effective and precise in operation. No buttons or levers are required to operate the **Air-O-Matic Power Steer**—it works automatically, helping only as the operator of the vehicle leads the steering wheel in either direction. It automatically stops helping when the operator stops leading the steering wheel. Details and technical information available on request. Valuable territory open in the South and West. Write or wire for full details.

STACKHOUSE

Drill Saw Tool Attachment

$18.00

An Indispensable Tool for Your Service & Body Shops

A great time and money saver for slitting bearings and bushings and for work on mufflers, heater installations, bolts and nut studs in hard-to-get-at places: For work on fenders, panels, door post bolts, rivets and frames.

Contact your supplier, or write direct.

E. H. STACKHOUSE
219 N. 63d St., Philadelphia 39, Pa.

CRESCENT

Wirey Joe

AUTOMOTIVE CABLE

Manufactured by
THE CRESCENT COMPANY, Inc.
Pawtucket, Rhode Island

CHECK THE WIRE ON EVERY JOB

DIETZ

Over a Century of Safety Lighting

R. E. DIETZ COMPANY
60 LAIGHT STREET
NEW YORK 13, N.Y.

CCJ Newscast

(CONTINUED FROM PAGE 244)

The conclusions were based primarily on experience with the new 7.60 x 15 tire which replaces the old 6.50 x 15, and it is safe to assume that similar results will obtain with the new 6.70 x 15 which replaced the old 6.00 x 16.

GAS TAX INCREASES PROPOSED

The Kentucky Legislature has increased its state's gasoline tax from 5 to 7 cents per gallon, effective April 1, 1948. The bill was enacted without public hearings and within 90 hours after the Governor's request, and has aroused protests of "railroading."

In Massachusetts bills have been introduced proposing gas tax increases of 1 and 2 cents per gallon..

In Missouri a House bill doubling the present 2 cent tax has been killed in committee.

In Michigan the State Highway Commissioner has advocated a 2 cent increase to help finance the proposed new highway program.

Illinois municipal and school officials are asking for a gasoline tax to aid local governments.

In Mississippi a legislative commission has recommended establishment of ports of entry for collection of gasoline taxes.

New York and New Jersey Governors have indicated that no increases in gasoline taxes are required or contemplated.

HIGHWAY TRANSPORTATION CONGRESS

Washington, D. C., has been selected for the Second Highway Transportation Congress to be held May 6 and 7 under auspices of the National Highway Users Conference. Sessions will be held in the Mayflower Hotel.

Representatives of many of the 1000 national and state highway user groups affiliated with the National Highway Users Conference will attend the Congress, as will officials and leaders in the automobile, petroleum, rubber and other industries. Alfred P. Sloan, Jr., chairman of the National Highway Users Conference, is scheduled to open the Congress.

(TURN TO PAGE 248, PLEASE)

FRINK SNO-PLOWS

REG. U. S. PAT. OFF.

Both "V" TYPE and ONE WAY BLADE TYPE

hand or power hydraulic control

FOR ALL MOTOR TRUCKS FROM 1½ to 10 TONS

CARL H. FRINK, Mfr., CLAYTON, 1000 Isl., N. Y.
DAVENPORT-BESLER CORP., DAVENPORT, IOWA
FRINK SNO-PLOWS OF CAN. Ltd., TORONTO, ONT.

BE SURE

the trademark "Timken" is on every tapered roller bearing you buy. Timken bearings are first choice with truck and trailer manufacturers. Remember—for the best in bearings—

IT'S "TIMKEN"
Trademark Reg. U. S. Pat. Off.

The Timken Roller Bearing Company
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WAUKESHA *Multi-Fuel* ENGINES

DIESEL OIL
GASOLINE
BUTANE

ALL LIQUID OR GASEOUS FUELS

DE VILBISS

Spray-Painting Equipment — Spray Booths — Canopy Exhaust Systems — Exhaust Fans — Air Compressors — Hose and Hose Connections — Oil Guns

Distributors or factory sales and service representatives everywhere

THE DeVILBISS COMPANY
Toledo 1, Ohio

NOW... America's Largest* *Supercharged Truck Diesel!*

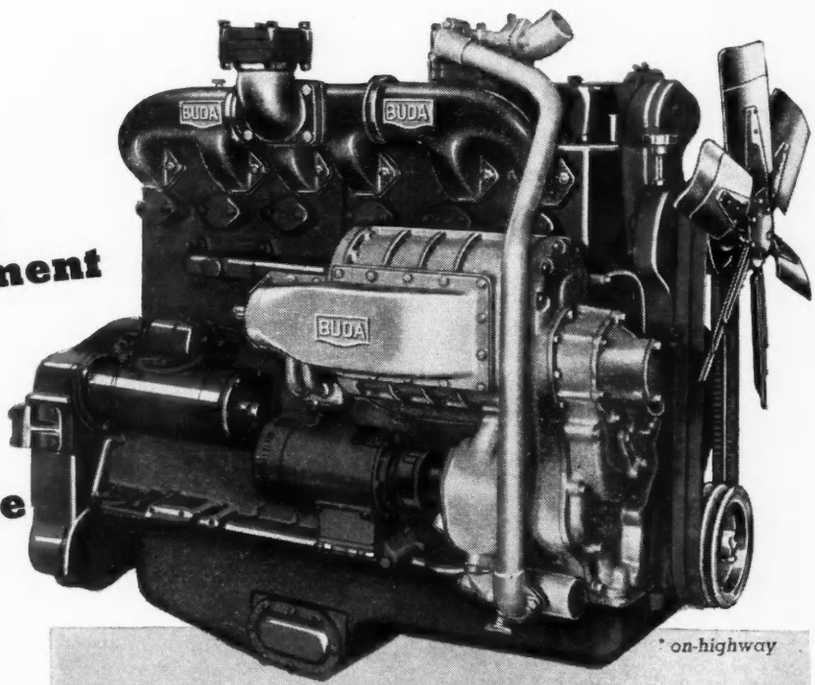
★ **Tremendous extra power**

★ **Less weight per cu. in. displacement**

★ **Faster acceleration**

★ **Higher average speeds**

★ **Lower fuel costs**



* on-highway

6-cylinder Buda 6-DCS-844 supercharged Diesel engine — 5¼" bore . . . 6½" stroke . . . 844 cu. in. displacement.

TO MEET THE NEED for increased power, especially on rugged mountain grades, Buda engineers developed the 6-DCS-844 — America's largest on-highway supercharged truck Diesel.

Total displacement of 844 cubic inches in 6 cylinders, plus gear-driven supercharger . . . 7 main bearings . . . wet sleeve liners and full-pressure lubrication . . . all combine to insure tremendously increased power, with a sizable reduction in weight per h.p. In addition, you get the road-proved advantages of Buda's heavy-duty 4-cycle design, which makes for smoother, smoke-free operation . . . added miles of low-cost service.

Driven hundreds of thousands of tough miles by leading truckers over the past year, this new Buda 844 SUPER DIESEL has already proved that it has what you need — "real authority" on grades . . . faster acceleration . . . higher average haul speeds . . . plus exceptionally low fuel cost. Write for the facts. The Buda Company, 15459 Commercial Ave., Harvey, Ill.

BUDA

HEAVY-DUTY *Supercharged* **DIESELS**

BA-2

. . . A *POWER-FULL* NAME IN TRUCK ENGINES

HOOF FULL POWER GOVERNORS

SEND FOR FREE BOOKLET
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6543 SO. LARAMIE AVENUE, CHICAGO 38, ILL.

OLTMAN-O'NEILL
all-steel, all-welded
VAN TYPE BODIES
and Packettes — America's most outstanding Truck Body values — are immediately available. Sold through dealers only. Write or wire for franchise data.
OLTMAN-O'NEIL COMPANY
5171 Martin Ave., DETROIT, MICH.

Watch for
"Accessory of the Year"
Page ad in April Issue
AUTOMOTIVE AIDS CORPORATION
7711 West Warren Ave.,
DETROIT 10, MICH.

C-O-TWO for MODERN FIRE PROTECTION

C-O-Two is fast, clean, non-damaging carbon dioxide — extinguishes gasoline, oil and electrical fires in seconds. Disappears after use . . . no clean-up necessary.
C-O-Two makes a complete line of Squeez-Grip hand portables, wheeled portables and hose rack units. Be safe . . . *always buy C-O-Two.*
C-O-TWO FIRE EQUIPMENT COMPANY
NEWARK 1, NEW JERSEY

MAREMONT HAS WHAT IT TAKES
MUFFLERS — TAILPIPES
ALLOY STEEL SPRINGS
MAREMONT AUTOMOTIVE PRODUCTS, INC.
So. Ashland at 16th St.
Chicago 8, Illinois

CCJ Newscast

(CONTINUED FROM PAGE 246)

GM STARTS SCRAP DRIVE

In the interest of maintaining production and employment in 1948, General Motors has launched an all-out effort among its employes, dealers and divisions to increase the flow of scrap iron and steel into the steel mills.

GM is asking its 365,000 employes, its 15,000 dealers and managers of all its plants to cooperate in launching immediately a nationwide voluntary scrap metal drive. The purpose of the drive is to get every pound of scrap metal out of the homes, farms, factories and other business places and into the steel mill furnaces as rapidly as possible.

Last year the steel industry in this country produced 63 million tons of finished product. Their capacity exceeds 65 million tons. A shortage of scrap metal as well as a short supply of coking coal held actual production under capacity.

NEW OFFICERS FOR LEASING GROUP

New officers elected to head National Truck Leasing System at that organization's third annual meeting held at Chicago the last week in January are: president—R. A. Munder, Yellow Rental, Inc., Philadelphia, Pa.; vice president—R. D. Sidel, Metropolitan Distributors, Inc., New York City; treasurer—Howard Willett, Jr., The Willett Co., Chicago; secretary—Fred P. Baker, Baker Truck Rental, Inc., Denver. The headquarters office is at 23 E. Jackson Blvd., Chicago, Ill.,

(TURN TO PAGE 250, PLEASE)

FOR ALL COMMERCIAL VEHICLES
MOTOR CARS, TOO
New — Better — Lower Cost
Highway Safety Flares
VARI-FLARE
VARI PRODUCTS CO.
2450 S. Prairie Ave., Chicago 16, Ill.

VANETTE
Parcel Delivery Bodies
★
VANETTE, INC.
2457 WOODWARD AVENUE
DETROIT 1, MICHIGAN

POWER-PLUS
Push - Pull
Hydraulic Jacks
Make tough Body and Frame Repair jobs easy.
Send for Illustrated Catalog
G.A.C. MANUFACTURING CO.
Ashland, Ohio

SUPER POWER - SUPER SMOOTH
SUPER FAST
Vacuum Power Brake Control
ROADMASTER
POWER BRAKE CONTROLS
ROADMASTER PRODUCTS CO.
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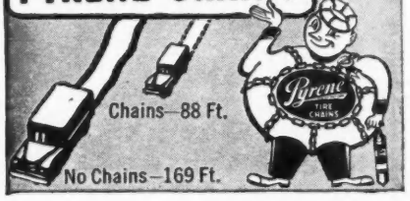
Los Angeles, Cal. Valparaiso, Ind.

FOR QUICKER STOPS ON SLIPPERY ROADS USE
PYRENE CHAINS


When the Motor is Down
Build it Up with...
Allied
MOTOR PARTS
NARA
ALLIED MOTOR PARTS CO.
DETROIT 1, MICHIGAN

'JEEP' 2 AND 4 WHEEL DRIVE TRUCKS

Cut Hauling Costs

Powered by the War-Proved Willys-Overland 'Jeep' Engine

TWO GREAT LINES—2-wheel-drive "Jeep" Trucks (4700-5300 lbs. GVW) are built for long service and low operating costs for medium-duty hauling. 4-wheel-drive "Jeep" Trucks (5300 lbs. GVW) meet a real need for a low-weight vehicle with all-wheel traction to get through mud, climb steep grades and operate off the road.

DESIGNED TO CUT COSTS—Every feature of these postwar trucks is designed to lower operating and maintenance costs. They are powered by the war-proved Willys-Overland "Jeep" Engine, world-famous for gas and oil economy, easy repair and long service. They are ruggedly built of quality materials to stand up. No body frills to add non-essential weight and decrease payload.

FUNCTIONAL BODIES—"Jeep" Truck body designs not only cut weight but also make maintenance and servicing easier. Note the hard-to-damage fenders, which make it simpler to change tires or put on chains. Wide hood opens from fender to fender, with engine and battery easy to reach. Lights are in protected position.

See the other features of 2- and 4-wheel-drive "Jeep" Trucks at Willys-Overland dealers, including the roomy cab, large windshield and windows, short turning radius and popular body styles—pick-up, canopy, van and platform-stake.

'Jeep' *Trucks*

WILLYS-OVERLAND MOTORS
TOLEDO, OHIO
MAKERS OF AMERICA'S MOST USEFUL VEHICLES

HAVING GLASS TROUBLE?

We can solve your problems with hard to break, shatter-resistant PLEXIGLAS*, the clear plastic which is becoming increasingly popular for truck and car doors. It will last the life of the vehicle when properly handled.

The use of PLEXIGLAS in motor vehicle glazing has been permitted in some states and should be checked with your state inspector.

Year	Make	Net Price
41-47	Ford Door	$8.45
41-47	Chev. Door	7.85
40-47	Dodge Door	7.85
37-47	(EH) Mack Door	10.19
37-47	LFT Mack Door	12.45
41-47	White Door	8.45
39-47	G.M.C.	7.85
41-46	Studebaker	5.40
37-47	International	8.83

Others $2.75 to $12.50. Prices on request.

Terms C.O.D. or cash with order, F.O.B. Aberdeen

ABERDEEN AUTO PARTS

Box 283-C Aberdeen, Md.

Phone Aberdeen 258

*PLEXIGLAS registered trade mark of Rohm & Haas Company.

FOR LOWER OIL COSTS

Cleaner Oil

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Conserves Engine Life

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Cuts Oil Expense

Bulletin No. 837 Gives The Facts

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MICHIANA PRODUCTS CORP. Michigan City Indiana

MICHIANA OIL FILTERS

HALLOWELL

SHOP EQUIPMENT OF STEEL

"Hallowell" Ready-Made Work-Benches are the ideal modern addition to your shop. They have steel tops; also available with smooth laminated wood tops and steel tops covered with "Tempered Presdwood." Made in standard heights, widths and lengths. "Hallowell" Foreman's Desks are all-welded steel construction—no weak or wobbly joints—smooth writing surface, just the right height and slant . . . convenient pigeon holes and drawer. Ask for the "Hallowell" Catalog. *Sold Entirely Through Distributors.*

Standard Pressed Steel Co.

Box 747, Jenkintown, Penna.

YOU CAN DEPEND ON

McCORD GASKETS

MOST CAR AND TRUCK MAKERS DO

McCORD CORPORATION

Detroit, Michigan

Gaskets . Radiators . Mufflers

Pipes and Oil Retainers

CCJ Newscast

(CONTINUED FROM PAGE 248)

The meeting was attended by truck lessor executives from all sections of the country. A program for expanding membership was endorsed in order to provide high standard truck leasing service to private users of trucks at points where adequate truck leasing facilities are not currently available. Reflecting this policy, six new companies have been added to the System's roster: Automobile Rental Co., Providence, R. I.; Lima Truck & Storage Co., Lima, Ohio; McArdle & Casazza, Albany, N. Y.; Holdcroft Lease-It, Inc., Sioux City, Iowa; Truck Leasing Corp., San Antonio, Tex.; National Motors Co., Trenton, N. J.

SEPARATE TRUCK SERVICE

A marked increase in the number of Ford dealers who are setting up separate truck sales and service establishments reflects a new and keener dealer interest in the truck business, according to J. D. Ball, director of the truck and fleet sales department of the Ford Motor Co.

The exclusive truck establishments. Mr. Ball pointed out, are operated, not under a separate contract or agreement, but as a supplement to the standard Ford dealer franchise covering retail sales of both passenger cars and trucks.

FEDERAL AID RECOMMENDED

With the three-year postwar highway program authorized in the Federal-Aid Highway Act of 1944 nearing a close, President Truman, in a special message, has recommended that Congress enact legislation at this session continuing Federal-Aid for the fiscal years 1950 and 1951 at the same annual rate of $500,000,000.

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